Contact, Interaction, Control –

The Archaeology of Inter-Regional Relations in Late Bronze Age Anatolia

Volume I

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Declaration

I declare that the work presented in this thesis is my own, and that all sources have been duly acknowledged in the text.

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ABSTRACT

My thesis "Contact, Interaction, Control - The Archaeology of Inter-Regional Relations in Late Bronze Age Anatolia" examines from an archaeological perspective a range of regional behaviours and their diachronic transformations that are indicative of a series of forms of interaction between the Hittite political and cultural heartland and its surrounding regions. The overall aim of this thesis is to gain an alternative, regional and bottom-up understanding of Hittite imperialism and its implications for local societies and the roles of decentralised forces in the shaping of a discourse of empire in Late Bronze Age Anatolia and northern Syria. In order to depart from previous practices of interpretation, I have adopted a theoretical framework that is rooted in general analogy with other imperial entities and draws on elements of empire theories and the study of other large-scale systems of unequal interaction.

Four strands of archaeological enquiry have been selected in order to approach these issues, in addition to overviews of the range of textually attested modes of imperial-local interaction and the political and economic structures of the imperial heartland and their material expressions. (1) The first material culture aspect investigated for the existence and degree of interaction between the central and surrounding regions is the spread of north-central Anatolian ceramic traits and its causal relation to imperial strategies of control and/or local choice. (2) Diachronic and synchronic transformations of regional settlement patterns across Anatolia and northern Syria constitute the second strand of enquiry. Continuity and especially discontinuity in structure and hierarchical organisation of regional settlement systems are seen as indicative of political and/or economic change and in some instances arguably of the imposition of imperial control. (3) A more direct measure of such control or close political interaction is the presence of north-central Anatolian administrative technology in surrounding regions in the form of seals, bullae and cuneiform texts. (4) The distribution of

landscape monuments and their imperial and local authorships provide insights into the ideological dimensions of claims to central power and their local challenge and negotiation.

Overlaying these four patterns of archaeological evidence, a picture of diverse and distinct regional relationships emerges that in some respects corroborates the textual accounts but also challenges the picture of centralised imperial supremacy often deduced from them by previous scholarship. It provides a network of insights into a much more complex and nuanced political, cultural and ideological dialogue between a political and militarily central region and its surrounding, occasionally subordinate, societies.

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Abbreviations

CHA	Chalcolithic
BA	Bronze Age
EBA	Early Bronze Age
MBA	Middle Bronze Age
LBA	Late Bronze Age
OH	Old Hittite
MH	Middle Hittite
EP	Empire Period
EIA	Early Iron Age
IA	Iron Age
NCA	North-Central Anatolian

CHAPTER 1: INTER-REGIONAL INTERACTION AND THE HITTITE EMPIRE – PAST APPROACHES AND NEW PERSPECTIVES

The political landscape of Late Bronze Age (LBA) Western Asia was dominated by a series of expansive socio-political formations that included the Hittite empire, Egypt, Mitanni, Babylonia and Assyria. The growth, integration and collapse of these empires and their impingement on a wide array of societies within and beyond immediate imperial control are important subjects of enquiry for archaeological and historical research as well as being of wider interest to the social and political sciences. The Hittite imperial entity and the range of inter-regional relationships it brought about present a valuable and, in comparison to other contemporary empires in the region, a largely underexplored case study for the political expansion of a highland society and its negotiation of different relationships of control and dependency within an environmentally, culturally as well as socio-politically diverse landscape. To date, these issues have been explored mostly from a textual, imperial-centric point of view (Map 1). This study examines from an archaeological perspective a range of regional behaviours and their diachronic transformations that are indicative of a series of forms of interaction between the Hittite imperial heartland and its surrounding areas. The overall aim of this thesis is to gain an alternative, regional and bottom-up understanding of Hittite imperialism, its implications for local societies alongside the roles of decentralised forces in the shaping of a discourse of empire that was multifaceted and complex, and thus more exciting as a subject matter of enquiry. In the same manner, it seeks to begin to make accessible the distinctive articulations of imperial relationships of LBA Anatolia to comparative analysis and interpretation.

In this thesis, an integrative approach is adopted that includes both textual and archaeological information in order to provide as complete as possible a picture of the

range of inter-regional relationships within LBA Anatolia and with northern Syria. The primary foci of research, however, are four explicitly archaeological approaches to some of the key questions of early imperialism, which in the present case study are largely inaccessible through other types of data:

- the analysis of cultural contact and interaction in the form of north-central Anatolian (NCA) ceramic traits in surrounding regions,
- the transformation of regional settlement systems,
- the distribution of NCA administrative implements and
- the locations and political origins of LBA landscape monuments.

1.1. Past Approaches to the Hittite Empire

This strategy of investigation is comparatively new to the archaeology of LBA Anatolia, as in the past, Anatolian and other Western Asian scholars have been reluctant to place early empires under the analytical lens of archaeologically informed approaches. One reason for this is the perceived difficulty in the recovery of political relationships through archaeological materials (e.g. Postgate 1994a, 1-3), a topic which will be discussed in Chapter 2. In view of the successful archaeological studies of early empires in particularly New World contexts (e.g. D'Altroy 1992; Malpass 1993; Berdan et al. 1996; Schreiber 1992, 2001), however, the most pervasive explanation for the dearth of archaeological studies of this kind in the Anatolian (Gorny 2002 for a general critique) and the wider Western Asian context (Adams 1979b; Postgate 1992, 1994a; Matthews 2003, 127-128) is the ready availability of documentary sources and their preferred utilisation in reconstructions of the internal structures and external relationships of early complex states. Thus, to date, the Hittite empire, its political history and its inter-regional relationships are essentially textually constructed.

Two points are important with regard to the Hittite and other relevant LBA documentary sources. The first concerns the limitations of the Hittite records themselves in terms of

the range of represented subject matters and their suitability for the analysis of imperial-local relationships. The second issue pertains to an apparent lack of disciplinary interest, despite recent encouragement (Steadman and Gorny 1995), in the conceptualisation of the Hittite imperial system as a comparable phenomenon, which warrants analysis from a broader, theoretically informed perspective.

The majority of Hittite documentary sources stem from archival contexts closely related to the state apparatus and fall within a limited set of categories consisting of political texts and diplomatic/administrative correspondences, historiographic works, documents relating to cult activities of various kinds and a legal code (Figure 1). Exceedingly rare are texts dealing explicitly with economic matters such as trade but also the ownership, distribution and transfer of property and associated fiscal matters (most recently van den Hout 2006). In stark contrast to other Western Asian societies, private individuals tend not to be represented in the surviving LBA Anatolian textual record. It is possible that such matters were recorded on wooden tablets along with other, short-term, information (Siegelovà 1986, 13; Herbordt 2005, 26). Equally restricted are texts which allow the reconstruction of bureaucratic hierarchies and their correlation to territorial units of administration. Echoing these characteristics, the majority of text-based treatments of the Hittite empire focus on aspects of genealogy, synchronisms and chronology, political geography, historical narratives, or on specific well attested imperial or international relationships (Klengel 1999, 394-411 for a thematic bibliography). Much more limited is the literature devoted to the organisation and development of the Hittite economy (e.g. Riemschneider 1958; Souček 1959; Diakonoff 1967; Singer 1984; Paroussis 1985), or the details of territorial divisions, administrative levels and procedures of political, economic, ideological or military control (e.g. Archi 1973, 1976-77, 1980a; Beckman 1995a, b, 1999; Imparati 1999). As a consequence, the economic structure and processes of administration are understood in outlines only in the imperial core region itself.

Quantitatively significant LBA text-finds are geographically restricted to four sites on the central Anatolian plateau, Boğazköy-Hattusa, Maşat-Tapikka, Ortaköy-Sapinuwa and Kuşaklı-Sarissa (Map 2). Of these, only the archives of the capital city, Boğazköy-Hattusa, have yielded substantial numbers of documents dating to the Hittite imperial phase, while the majority of tablets from the three other sites relate to the preceding, Middle Hittite, phase (Figure 2). Limited tablet finds or fragments were also found at Alaca Höyük, İnandık, Kuşaklı (Yozgat), Kayalıpınar (Sivas) and Tarsus. Additional LBA textual evidence comes from northern Syrian sites such as Ras Shamra-Ugarit, Tell Atchana-Alalakh, Meskene-Emar and Tell Mishrifeh-Qatna and from outside the Hittite sphere of effective control in Western Asia and Egypt. Large parts of potentially Hittite controlled Anatolia have, thus, no textual voice of their own, whether through accidents of preservation or real absences. In terms of documentary sources these areas are accessible, if at all, solely via central Anatolian archives or through their external connections to the wider East Mediterranean and Western Asian world.

Hittite expansionism, as presented by LBA textual sources, was effected by spurs of military campaigns from around 1650 BC (Appendix 1 for a discussion of chronology) and direct militarism, or its coercive persuasion (Luttwak 1976; Mann 1986), remained a characteristic feature of Hittite integrative strategies. Besides military intervention, however, the majority of imperial strategies represented in some detail in the textual sources, operated mostly on a political level and in areas at some distance to the central Anatolian plateau. From ca. 1400 BC, tactics of control and integration involved the establishment of bureaucratic outposts in the form of viceregal seats, the drawing up of vassal treaties, and the arrangement of royal marriages. Less detailed textual information is available for direct strategies such as deportation of defeated populations and their resettlement in demographically deprived regions and associated (re-)building projects. Tribute was extrapolated from particularly the Syrian vassals. Overall, the

textual evidence suggests a comparatively low degree of reinvestment of revenue in imperial infrastructure.

The selective perspective provided by the textual record of Hittite strategies of control and degrees of integration, although vital for an understanding of the overall structuring of relations of domination in specific areas, cannot *a priori* be taken as representative of the totality of inter-polity relationships within the Hittite empire. Rather, it is a question that requires investigation. Moreover, the high political or, alternatively, basic military level of interaction suggested in the most prominent documentary sources, forcibly leaves open a whole array of key questions concerning the practical intricacies and range of variation in imperial policies, their local mechanisms of implementation as well as their implications for the social and economic organisation and cultural identities of subordinate and surrounding societies.

Despite the limitations in the scope of the documentary sources, an implicit or explicit complacency concerning the quantity and quality of attainable knowledge about the Hittite empire from these sources pervades the general literature on the subject. Larsen's (1979b, 83) summary of the Hittite imperial system illustrates well this commonly held perception:

> The Hittite system is known better than any other due to the discovery of the extensive royal archives in Hattusa. It was basically simple; the domination of the Great King was based on sworn treaties with vassals and clients of varying status, all of them referred to as "Kings". They had to acknowledge a number of duties towards the Great King, both of a military and economic nature, and they could not have independent diplomatic contacts with other kings. This amounts to an intricate system of indirect rule which covered all of the Hittite area.

The generalised nature of this statement relates to the breadth of Larsen's (1979b) review of the tradition of empire in Mesopotamia in which the Hittite example only features on the margins. However, it nonetheless exemplifies both an unjustified sense

of accomplishment and a tendency to obliterate the fact that empires such as the Hittite existed not only on the chess-boards of power-politics but had very real, and often deep-reaching, consequences for those affected by them, whether through direct means of suppression or indirect political and economic effects, which are still largely unexplored. I would venture as far as to suggest that this "simple" picture of the Hittite empire, and any other complex society, has exhausted its academic appeal.

Gurney's (1979) contribution to the conference proceedings of *Power and Propaganda: A Symposium on Ancient Empires* (Larsen 1979a), in which he examined Hittite imperialism through a combination of royal deeds and edicts, mirrors Larsen's (1979b) statement in its conception of Hittite imperial structure and the sources of its expansion. Nevertheless, Gurney credibly distinguished two phases in Hittite political history and contests Mellaart's (1974, 496) assertion that the concept of empire represents a misnomer for the Hittite phenomenon. In Gurney's model, the Old and Middle Hittite kingdoms are defined as a period of struggle for central Anatolian unification. Expansion beyond this core area is interpreted as nothing more for the Hittite elite than "...an ideology in its own right, a true sport of kings..." (Gurney 1979, 163). The second phase of expansionism from the 14th century BC is perceived as the establishment of an empire proper through the strategies of post-conquest consolidation of Suppiluliuma I. Here too, Gurney (1979, 163-164) gives weight to ideology as a motivational factor, in this case vengeance and, at the same time, the (re-)establishment of order.

Gurney's (1979) treatment of the subject successfully defines a qualitative transitory line between the formation of a territorial state in a previously decentralised political landscape and the imperial expansion beyond the geographical and cultural limits of the central plateau. He also clearly points out the chronic core-instability that affected many early empires, which cautions against a monolithic view of the players in imperial relationships. The criticism that has to be levied against his approach, as

representative of much scholarship on the subject, is that in contrast to the generalist and theoretical concerns of other papers in the same volume (Eisenstadt 1979; Larsen 1979b; Adams 1979a, b; Ekholm and Friedman 1979), all of Gurney's conclusions are reached almost exclusively on the basis of the Hittite textual material. As a consequence of this narrow focus, higher-level inferences about the sources and nature of Hittite imperialism fall prey to the core-centric bias purposefully transmitted by Hittite state propaganda in those texts on which the analysis is based.

This mode of research has not only heavily influenced the direction of past archaeological work but also provided its main interpretive methodology. Van Loon (1980, 275) in a discussion of the MBA fortification walls at Korucutepe, for instance, insists that "...what historical events the archaeological remains are to be correlated with is better left for the historians to decide". Such views, however, do not only perpetuate a rather bleak outlook on the potential of archaeological research, but the flawed methodological approach they reflect poses considerable problems for the archaeology of LBA Anatolia. These range from the formulation of an archaeological chronology (Schoop 2003a) to the interpretation of processes and patterns observable in the archaeological record such as destruction horizons (Seeher 2001b) or culture change. In recent years, archaeologists have become more emphatic in their call for a methodological separation of textual-historical agendas and archaeological data at primary levels of investigation. As part of this development, firmly established "common knowledge" about Hittite Anatolia is in the processes of critical reassessment and first results carry wide-ranging implications for our understanding of settlement developments at the Hittite capital and other central Anatolian sites (e.g. Mielke, Schoop and Seeher 2006). Although increasingly questioned and rejected, the consequence of the essentially circular interpretive methodology of many past approaches, has been that the numerous archaeological projects conducted in central and surrounding regions of the Hittite empire have had comparatively little *actual*

impact on common interpretations of the functioning of this military and political enterprise and the local economic, social and cultural relationships created by its expansion.

In contrast to Hittite textual sources, however, material culture as the expression and active tool of inter-regional relationships ranging from cultural contact to domination, negotiation and resistance is the most abundant class of evidence available for the analysis of this particular political entity (Map 3). In addition to its overwhelming abundance, archaeological data furthermore offer the possibility to ask new questions about Hittite imperialism and the impact its lifecycle had on different subject populations, or to rephrase old queries to fit the possibilities and restrictions of the archaeological record (Adams 1979b). Few Anatolian scholars have as yet followed Adams' (1979b, 396) "... plug for archaeology, although not the kind of archaeology that is conceived as a process of archival discovery subordinated to strictly Assyriological strategies" (or Hittitological strategies in this case).

1.2. Unexplored Aspects of Research

Due to reasons outlined above, there is a general lack of analytical approaches, in terms of both archaeological and textual-historical research, to Hittite imperialism as the particular articulation of a broader, socio-political phenomenon. Regarding especially archaeological research, no previous studies can be identified having explicit research objectives directed towards the analysis of Hittite imperial relationships using a comparative archaeological methodology. Although large parts of Asia Minor are archaeologically under-explored in comparison to other areas of Western Asia (Gorny 1989, 78), considerable progress has been made in recent decades and numerous excavations and survey projects have greatly enhanced our knowledge of regions on and beyond the central plateau during the period of the Hittite empire. The majority of this work, however, centres on either specific sites or survey areas and comparative

cross-regional analyses are usually restricted to typological issues related to dating and stylistic provenance.

The notion of an "Archaeology of Empire" in Anatolia was introduced only relatively recently by Steadman and Gorny in a series of papers in the *Bulletin of the Schools of Oriental Research* 299/300 (1995). As part of this project, Gorny (1995a) presented a possible Hittite strategy of incorporation at Alişar Höyük based on archaeological and textual evidence, which in many ways presents a departure from earlier approaches to the subject. Few Anatolian scholars, however, appear to have taken up the challenge, as the conspicuous absence of the Hittite example in recent publications on the global phenomenon of early empires testifies (e.g. Alcock et al. 2001; papers in *World Archaeology* 23, 1992).

In another paper of this *BASOR* volume, Sinopoli (1995; 1994) outlined the possibilities of archaeological contributions to the exploration of early expansive polities and the analytical criteria necessary for the formulation of general statements about imperial systems. These, first and foremost, require the collection and comparison of data from multiple regions within an empire (Sinopoli 1995, 3). To date, no such research, involving a cross-regional synthesis of different types of archaeological evidence on both macro and micro scales of analysis, has been conducted in LBA Anatolia and with the Hittite empire in mind.

1.2.1. Research Questions

Specific research questions relevant to the investigation of regional variation in cultural connections with the NCA plateau (Chapter 4), the transformations of settlement systems (Chapter 5) and the distribution of administrative technology and landscape monuments (Chapter 6) are outlined in each of the relevant chapters. The results from these four studies will be subjected to a further round of analysis in Chapter 7 with the

aim to draw an "archaeological map" of inter-regional relations within and beyond Hittite imperial boundaries and to document the overlap between the four types of evidence as indications for the depth of imperial hold over a particular area and the latter's inclination towards Hittite cultural and political connections. Overall, this study is governed by the following, broad research questions:

- What archaeological evidence is there for interaction between the Hittite cultural and political heartland and surrounding regions during the LBA?
- At the same time, what are the transformations, if any, that took place in different parts of Anatolia and northern Syria?
- How closely can these transformations be associated with imperial control?
- Are there regional differences in the intensity of interaction and the degree of imperial control discernable in the archaeological record?
- How does the archaeological evidence for inter-regional contact, interaction and control compare with the degree of attention particular regions receive in the textual record? Can textually based claims over a territory be compared, challenged or corroborated with archaeological evidence?

1.2.2. Choice of Data and Approach

Inherent in the archaeological study of political entities such as empires is a problematic uncertainty about whether a particular material culture trait or pattern represents the implementation of, or the response to, strategies of empire building, integration and exploitation or, alternatively, relates to independent cultural or economic transformations (Postgate 1992, 1994a; Barfield 2001, 32; Matthews 2003, 131). This issue will be discussed in detail in the following chapter (Chapter 2) but it is of particular importance for the question of data selection, as the reconstruction of political relationships *as such* on the basis of archaeological data may have its difficulties, particularly in areas of indirect or hegemonic rule. However, even political

relationships are not articulated solely between a central monarch and his regional counterparts but like all other types of human behaviour are embedded and expressed in a material world and result in material consequences. They are therefore open to archaeological analysis.

The choice of material culture categories in the exploration of the Hittite and any other early imperial entity is necessarily determined by the nature of previous research and depends on the types of data that can be consistently gathered across large geographical areas. Restricted by these parameters, the four archaeological categories of investigation are (1) the distribution and intensity of NCA ceramic traits in surrounding regions; (2) the diachronic and synchronic transformations of regional settlement patterns across Anatolia and northern Syria; (3) evidence for north-central Anatolian administrative technology in the form of seals, bullae and cuneiform texts in surrounding regions and (4) the distribution of landscape monuments of both imperial and local authorship.

1.2.2.1. Ceramic Analysis

The first material culture aspect investigated for the existence and degree of interaction between the central plateau and surrounding regions is the distribution NCA ceramic traits. The mundane character of much of LBA Anatolian pottery makes it well suited for the assessment of inter-regional interaction at a localised social and cultural scale. At the same time, the degree to which material culture elements may be associated with imperial strategies of control, or reactions to them, is itself an important subject of inquiry in this first analysis, which has imposed itself through an ongoing academic debate. In the past, pottery in surrounding areas similar to that of the Hittite political and cultural heartland has been interpreted either as a generalised material "reflection" of the Hittite empire leading to whole settlement horizons being referred to as "Hittite" on this basis. More recently it has been identified as the result of specific imperial

administrative and/or economic strategies, including the monopolisation of provincial ceramic production.

Chapter 4 investigates the published ceramic evidence from eight major sites (Porsuk, Gordion, Beycesultan, Aphrodisias, Tarsus, Korucutepe, Norşuntepe and Tille Höyük) for a process of stylistic and technical homogenisation emanating from the NCA plateau to other areas of Asia Minor, which, in many cases, did not previously take part in the central Anatolian cultural tradition. It does not, *a priori,* presuppose a causal link between (material) culture change and political control in imperial situations. Rather it puts these issues into question from a theoretical as well as a practical point of view.

This process begins with the reinvestigation of the excavated ceramic evidence from the above settlements for the *actual* degree of stylistic and technological uniformity of this cross-regional ceramic phenomenon. It also includes the assessment of contextual information, potential functions and circumstances of consumption alongside a review of notions of standardisation and standards of craft production in complex socio-political systems in Anatolian archaeology.

The findings of this analysis indicate a series of variations in regional ceramic developments. The differences observed in the assemblages of Porsuk, Gordion, Beycesultan, Aphrodisias, Tarsus, Korucutepe, Norşuntepe and Tille Höyük in comparison to the Boğazköy-Hattusa repertoire include chronological, formal and technological variables and each of the sites investigated seems to have a rather different proportional composition of local versus NCA formal and technological elements. As a result, regional groups can be identified which point towards chronologically and geographically distinctive inter-regional relationships that involved somewhat different modes of cultural transfer and local adoption. The analysis also indicates that the development of LBA Anatolian pottery traditions cannot be viewed in

isolation from the wider Western Asian and East Mediterranean context and the transformations of value systems and modes of social representation that involve the widespread production and use of plain, seemingly utilitarian, pottery.

1.2.2.1.1. The Approach

The analytical methodology adopted in Chapter 4 is necessarily straightforward due to variable sample sizes and other data-quality issues, which render this study a first step of analysis. It involves a qualitative classification of the corpus of published vessels and diagnostic sherds from each site according to formal and technical criteria. Wherever available, contextual information is taken into account in order to assess the social and economic dimensions of the pottery in question and whether production of, or access to it, was monopolised. In this way, differences and commonalities in repertoire composition and aspects of pottery production across a wide geographical region can be highlighted and the relationships of each site with the centre of the NCA ceramic tradition better assessed and qualitative differences in inter-regional relationships identified.

1.2.2.2. LBA Settlement Trends

In the following chapter (Chapter 5) the units of analysis will be extended from sites to regions in a comparative study of diachronic settlement developments from across Anatolia. Reasons for choosing archaeological surface data as a second path of inquiry are the unique geographical and chronological perspective this method provides on longer-term human behaviours that do not generally appear in the textual sources. Site locations and regional organisations are processes dependent on a number of factors, which include physical and environmental conditions, but settlement patterns are also shaped by historical and socio-political circumstances. Even if more detailed causal links between regional settlement changes and Hittite imperial interference are difficult to define conclusively, continuity and especially discontinuity in regional settlement

structures and hierarchical organisations are suggestive of political and/or economic change and, arguably, may be associated with imperial control.

Three distinct cross-regional settlement trends were identified in this analysis. These include processes of abandonment or degradation of dominant MBA sites and their replacement by newly established regional and sub-regional centres in the size range of excavated sites in the imperial core region. At least two regions appear to have undergone settlement developments that may be argued to be indicative of incorporation into a larger socio-political structure but with the retention of previous hierarchical arrangements, which may be called "intensive hegemony". A third process is the formation of frontier zones to the north and east of the central plateau and the likely loss of control over regions located beyond these borders, which experienced an apparent cessation of permanent settlement.

1.2.2.2.1. The Approach

Archaeological surface survey and associated methodologies provide the raw data for the analysis of what Cherry called (1987, 146) "the spatial operation of power and dominance". This kind of regional approach has seen a dramatic surge in Turkey and neighbouring regions over the last decades and about 60 surveys of varying geographical breadth and duration have been included in the analysis of Chapter 5. This large but disarticulate corpus of regional settlement data, which varies widely in terms of quality and quantity of published information, requires basic systematisation in the form of a database and "normalisation" in terms of coherent chronological labels as well as the calculation of site-sizes as a first stage of investigation. The second stage consists of a set of basic spatial analytical approaches. In regions where publication details permit, the existence of site-size hierarchies is investigated as well as trends of settlement continuity. For two of the incorporated regions, rank-size analyses are conducted and hypothetical territorial divisions proposed on a trial basis to establish a

measure of political integration. The results of these regional investigations are subsequently combined to formulate an empire wide perspective on settlement organisation and integration.

The literature on cross-cultural settlement data and pathways of interpretation is vast and several of its methods are applied in Chapter 5. The majority of discussions of survey methodology and theoretical models are based, however, on the smaller-scale societies and settings of the Mediterranean basin, while geographically closer Western Asian case studies from the Mesopotamian plains often concern much larger settlement agglomerations than those found in the high-land contexts of Anatolia. Conversely, Hittite textual sources mention many hundred habitation sites across Anatolia and northern Syria (listed in del Monte and Tischler 1978; del Monte 1992) but their undifferentiated designation as "towns" (URU or Hittite *happira-*) regardless of size and function, precludes the use of textual material alone to reconstruct the spatial organization of the Hittite polity and its peripheral territories. In order to merge a generalist approach with the specific conditions of the Hittite empire, an interpretive model, based on both archaeological and textual data on LBA administration and economic structures, is constructed in Chapter 3.

Insights into the socio-politically higher spheres of inter-regional interaction, which can be closely linked to Hittite and local strategies of direct control and ideological projection, are provided by the analysis of NCA administrative technology in surrounding regions and the distribution of imperial and local landscape monuments in Chapter 6. Both data categories are treated here as archaeological evidence and analysed accordingly. In most cases, however, they also incorporate textual elements such as the names of seal owners and the authors of monumental rock sculptures, which occasionally permit their concrete identification with historically attested personages, their titles and roles in the leadership and administration of Hittite spheres

of effective control. Chapter 6, therefore, also represents a link between the archaeologically observed patterns of Chapters 4 and 5 and the textual historical frame of reference.

1.2.2.3. North-Central Anatolian Administrative Technology and Landscape Monuments as Projections of Central and Regional Power

Administrative implements and evidence for their use at settlements surrounding the central plateau can be representative of a number of events and practices, from the exchange of correspondence to the management or supervision of a regional polity by imperial officials. The adoption and emulation of imperial glyptic and administrative practices by regional elites present complementary or alternative local behaviours in the negotiation of social and political power. The results of Chapter 6 indicate a clear chronological and geographical pattern for the concentration of Hittite imperial administrative effort in the south and south-east of Anatolia and in northern Syria. The degree of central administrative interference and local practices of adoption and hybridisation, however, differ distinctly between and within these regions. In contrast, western Anatolia has yielded only a very limited number of NCA seals and seal impressions, which could indicate a lack of direct imperial strategies of control and, perhaps, also limited interaction along formalised administrative and/or diplomatic channels.

Conversely, the spatial and chronological arrangement of LBA rock reliefs and stone carvings and the diversity of their authorship provide insights into an inter-regional ideological discourse, rather than an imperial monologue, over the appropriation of territories and their boundaries. The negotiation of imperial and regional power was led through a common iconographic understanding as well as, or in addition to, the use of Luwian hieroglyphic inscriptions. At this ideological level Hittite great kings were most concerned with the demarcation of the boundaries of the central Anatolian plateau and the securing of access routes to and from this central region. This highlights the

strategic and ideological importance of the regions concerned as well as the unsettled nature and ongoing negotiation of territorial hegemony over them, as more localised representations are found in the same regions. Landscape monuments in western Anatolia are exclusively of local authorship.

1.2.2.3.1. The Approach

In terms of both NCA administrative technology and landscape monuments, the methods of analysis are simple. They include the compilation of an as complete as possible inventory of the geographical and chronological distribution of relevant data categories and, whenever possible, the identification of their origin with imperial or localised agents on the basis of inscriptive evidence and general iconographic and stylistic characteristics.

1.2.3. Data Quality and Quantity

In the course of discussions about this research with Anatolian and other archaeologists, concerns were at times voiced about the amount and quality of data available for such an investigation. These concerns are very valid in that LBA Anatolian archaeology suffers from a number of problems related to a disproportional focus on the imperial capital, Boğazköy-Hattusa, which, until recently, has overshadowed results from other excavated sites and deflected attention from broader issues concerning the Land (rather than the City) of Hatti and its surrounding and subordinate territories. The same problem in a different disguise is the traditional focus of Western Asian archaeology on large settlements with the promise of monumental architecture and possible archival discoveries. While there are a number of regional centres excavated in the Hittite heartland, which can be drawn upon for interpretive approaches to, for instance, the reconstruction of the higher echelons of LBA settlement patterns (Chapters 3 and 5), there are no LBA villages or hamlets excavated in Anatolia that would help us to appreciate the whole spectrum of the spatial expressions of regional

socio-political organisation (e.g. Gorny 2002; Schoop 2006, 237). At another level of investigation, LBA Anatolian archaeology has to come to grips with the nature of the local ceramic tradition and the difficulties this poses for the formulation of a fine-grained relative chronological framework (Schoop 2003a; Chapter 4).

Limited and problematic data sets, such as some of those selected for this thesis, however, are the livelihood of archaeological research, and with due acknowledgement of the limits of acceptability, they may nonetheless form the basis of preliminary archaeological conclusions and interpretations. Concerning claims of limited availability of information, the analyses presented in Chapters 3 to 6 also testify in some respects to the contrary: I found there to be a comparative wealth of archaeological information available in the public domain, but perhaps not in obvious places and in a disarticulated form that requires normalisation and coordination of rather raw data. Several steps, outlined in each of the relevant chapters, have been taken to order the available data into approachable comparative formats and to produce an overview of the record available. The conclusions, which will be reached in the course of the following chapters, are expected to be subject to revisions in the light of future field research. In fact it is hoped that the present study will encourage more archaeological approaches to the various aspects of LBA inter-regional relationships and Hittite imperialism.

1.2.4. The Theoretical Framework

As indicated at the outset of this chapter, past approaches to the Hittite imperial phenomenon, whether textually orientated or attempting to interpret archaeological data, have, with few recent exceptions, remained focused on the specifics of the Hittite evidence. The Hittite empire and the various forms of its imperialism, however, are not unique but rather display structural and processual traits that make them comparable, at a general level, to other early imperial formations across the world.

The theoretical framework, which informs both the general research questions in this thesis and which serves as a broad interpretive reference grid, is outlined in detail in the following chapter (Chapter 2). It is constituted by the combination of models of unequal political and economic relations, which derive originally from sociology and political science approaches to the conceptualization of social power and its articulation in state and imperial structures, and general analogical references to other early imperial formations and their material expressions in the archaeological record.

1.3. Thesis Structure

Chapter 2 reviews the theoretical literature on empires, large-scale networks of asymmetrical interaction and their developmental trajectories, and justifies the departure from particularist approaches to the Hittite empire.

Chapter 3 outlines the merits of an integrated, textual-historical, approach to the Hittite empire under the guidance of an archaeological research design. It examines the problematic usage of the word "Hittite" in relation to material culture and proposes a more clearly defined terminology. The second part of Chapter 3 is concerned with textually attested aspects of inter-regional relationships. It also explores the socio-political organisation and economic characteristics of the imperial heartland and, on this basis, presents an interpretive framework for the identification of spatial signatures of Hittite political and economic organisation using both textual and archaeological information.

Chapter 4 assesses the published LBA ceramic evidence of eight major sites from across Turkey for their formal and technical similarities with the NCA tradition in order to determine the actual degree of homogeneity and difference between regional repertoires. It further explores the issue of ceramic standardisation and associated questions of modes of craft specialisation and production and consumption levels in the

light of recent archaeological and ethnoarchaeological research in order to identify potential processes behind the transfer of this particular aspect of imperial culture to different parts of Anatolia.

Chapter 5 contains the diachronic and comparative analysis of settlement patterns drawn from survey projects from across Anatolia and parts of northern Syria. The focus of this analysis lies on the reconstruction of regional settlement systems, their transformations in the LBA and the identification of the spatial signatures of different types of imperial control or regional independence.

Chapter 6 assesses the distribution of NCA administrative technology in peripheral regions and the use of landscape monuments in the projection of territorial hegemony as part of high-level political and ideological strategies of control and negotiation.

Chapter 7 presents a summary of the results of the four strands of investigation. It integrates the findings of each archaeological analysis on a regional level and formulates an empire-wide perspective as well as compares the archaeological situation with the inter-regional interaction hinted at in the textual sources. A final level of analysis investigates whether these combined results fall into definable patterns, which may, hypothetically, be attributed to forms of imperial control or regional independence.

CHAPTER 2: APPROACHING EMPIRE - A THEORETICAL DISCUSSION

An integrated, archaeological and textual-historical approach is paramount for the exploration of inter-regional relationships in LBA Anatolia and of Hittite imperialism in particular. As I have outlined in the previous chapter, however, there is at present a gross imbalance in the way these records are perceived and drawn upon for analytical and interpretive purposes. Archaeological evidence has corroborated the existence of an LBA imperial state primarily by identifying a capital city and a hinterland, which displays an array of cross-culturally observed characteristics of imperial centres. Progress has been made in recent decades in the archaeological exploration of other parts of the central Anatolian plateau and of regions geographically peripheral to the Hittite power base. The conventional frame of reference for the interpretation of the archaeological data from these projects, however, is in many cases the LBA textual-historical evidence.

Source criticism and the explicit discussion of the possibilities and limits of the archaeological record as well as a critical rejection of the abuse of material culture as a mere mirror for events described in the texts are central aspects in a recent, but increasingly visible, trend in Anatolian archaeology (Seeher 2001b; Schoop 2003a; Mielke, Schoop and Seeher 2006). An alternative research strategy to traditional, culturally and socially particular, text-focused explanations of archaeological phenomena is offered by the abstraction and theoretisation of specific historical socio-political processes and the adoption of a comparative approach to the range of possible behavioural strategies of imperial and local agents. One of the key advantages of such a theoretical perspective is the requisite of an explicit awareness of underlying preconceptions concerning the object of analysis and its causal

relationships with archaeological patterns and transformations such as (material) culture change (D'Altroy 1992, 1; Schreiber 2005, 238-239).

The Hittite empire and its inter-regional relationships and local responses to it are unique in terms of their historical circumstances, developmental processes and cultural expressions. Nevertheless, they share many generic traits with early empires from across the world, including potential reasons for, and strategies of, enlargement, integration and exploitation. Equally, cross-cultural comparisons and analogy, in the loose sense of "explanatory sketches" (de Montmollin 1989, 37), can aid in the definition of strategies available to societies subordinate and those otherwise affected by empire. Both long-standing scholarly interest in early imperial formations and the recent surge in comparative "Empire Studies" across disciplinary boundaries have contributed to (Lattimore 1962; Eisenstadt 1963, 1979; Luttwak 1976; Mann 1986; Doyle 1986) and pioneered the use of a series of analytical frameworks for the general mechanisms governing imperial relationships and the definition of archaeologically tangible aspects of such connections (Larsen 1979a; D'Altroy 1992; papers in *World Archaeology* 23; Sinopoli 1994, 1995; Smith and Montiel 2001; Alcock et al. 2001; Matthews 2003; Parker 2003).

2.1. Conceiving Empire: A Theoretical Framework

The conceptualisation of empire and imperial relationships involves several theoretical and interpretive levels that require a degree of interconnection and range from the mechanisms of political domination and long-term change to relevant aspects of archaeological theory (Yoffee 2005 for a recent discussion). However, "[n]o single theory identifies, explains or understands all the key structures and dynamics of international politics" (Burchill and Linklater 2005, 23) and a bewildering array of theoretical perspectives exists on empire, imperialism and large-scale interaction networks outside state monopoly or control and extending beyond state boundaries.

Each individual theoretical model has its limitations typically in terms of the focus on particular aspects of such relationships and the determinative role it attributes to one or a combination of factors (economic, military, political or ideological) in long-term development. The concentration on specific "primary movers" for imperial expansion, such as economic production, in the grand social theories are to be seen as the products of prevailing historical and intellectual circumstances at the time of their formulation throughout the 19th and 20th centuries AD (Doyle 1986, 32; Wolfe 1997). Over the last two to three decades there have been increased criticisms levied against the perceived static or cyclical perspectives of functional/systemic social theories and their tendency to view players in imperial relationships and societies in general as unitary, integrated entities, who act out "systemic requirements" (Mann 1986, 3-5, 30; Cowgill 1988, 152-54; Giddens 1979, 7; 112-113 on social networks in general). An additional point of dissatisfaction with some of the most prominent models for such large-scale networks of interaction, particularly from an archaeological perspective, is the concentration on, and overemphasis of, the agency of the central polity in the shaping of imperial relationships. As the background of most theoretical paradigms on the subject is textual-historical information, the reactions of local societies to military aggression and strategies of exploitation which informed historically contingent, but nonetheless comparable, negotiations of imperial relationships have so far been paid comparatively little academic attention (Stein 1998; Schreiber 2005, 237-238).

As a response to some of these criticisms, systemic models have undergone modifications particularly in archaeological applications. Core-periphery theories, for instance, have been adapted to take into account the disintegrated nature of early complex societies and the characteristics of the various networks underwriting their socio-political, economic and cultural organisation. Moreover, the accuracy of predictions of developmental processes by theoretical models of this kind, while not necessarily an indicator of their heuristic value (Burchill and Linklater 2005, 23), should

not be accepted from the outset but, as D'Altroy (1992, 16) pointed out, made the subject of archaeological investigation.

Ultimately, the archaeologically informed study of imperial relationships requires the adaptation of theoretical frameworks that can provide a suitable canvas for the analysis and interpretation of material culture patterns and allow for the archaeological assessment of the validity of their hypotheses. Conversely, the relationships and mechanisms inherent in complex political networks, from particular historical to cross-culturally general, that have to be taken into account in the study of empires, are often difficult to engage with exhaustively through archaeological materials (e.g. de Montmollin 1989).

In the next section, I will discuss the main characteristics, options and constraints of imperial systems and their developmental dynamics in the light of cross-cultural empire studies and a number of theoretical models. The applicability and value of these frameworks will be considered in the light of the empirical and diachronic analyses of aspects of Hittite-local interaction at different social, cultural and political levels in the following chapters.

2.1.1. An Outline of Empire

The discussion of the concept of empire necessitates a definition, however general, of the phenomenon under investigation. Attempts to grasp the essence of empire and imperialism are as diverse and controversial as they are numerous (e.g. Robinson 1972; Doyle 1986; Sinopoli 1994, 160; Wolfe 1997, 389). With the exception of restrictive definitions which focus on the expansionary dynamics of capitalist economies (e.g. Lenin 1939), inclusive views have tended to converge on the general observation that empires are constituted by relationships of effective control of one society over another. Domination of this kind includes both domestic and international

policy, and military as well as economic mechanisms may be imperial (Doyle 1986, 30-32). The imperial relationship, however, is dialectic, and historical developments of empires are not *solely* the results of the will of central elites but also of the trajectories resulting from a dynamic interchange with dominated, dependent and independent societies.

An archaic empire (Schreiber 1992 cf. Sinopoli 1994, 159) such as the Hittite may be defined as "...a territorially expansive and incorporative kind of state, involving relationships in which one state exercises control over other sociopolitical entities..." and its imperialism "...as the process of creating and maintaining empires..." (Sinopoli 1994, 160; Doyle 1986). Beyond such general characteristics, empires are highly diverse in terms of the societies they incorporate, the means of control they employ and the relationships they form with local polities. Yet, even these aspects of individual empires' diversity may be a cross-cultural characteristic of the phenomenon (Barfield 2001, 29).

2.1.1.1. The Sources of Imperialism

The source or sources of empire, i.e. the reasons why some societies expand and subdue others and in what circumstances, is a much debated and little agreed upon question. Explanatory schemes divide principally into three broad categories of metrocentric, pericentric and systemic models. Metrocentric (Doyle 1986, 22-24) explanations focus on the characteristics of core societies in which underlying propensities to expansion are acted out by members of the core elite for social and/or economic reasons. Conversely, pericentric views (Gallagher and Robinson 1953; Robinson 1972) ascribe importance to the characteristics of peripheral polities in shaping the nature of imperial relationships and the degree of control exerted over them. Specific explanations of historical cases have, for instance, stressed external threats or boundary insecurity as a trigger for defensive, but ultimately expansive,

strategies (Doyle 1986, 25-26; Luttwak, 1976, 49 for the strategy of the Roman Republic).

Dissatisfied with reductionist/dispositional models devised by advocates of the metrocentric perspective, more recent approaches have favoured systemic models associated with realist theories of international relations (Doyle 1986, 36-30). These perspectives stress the importance of the wider international system and the competition it induces between polities in "a battle of relative weight: to fail to grow is to decline" (Doyle 1986, 26).

A recent fourth trend in the explanation of the sources of empire deriving from neo-institutionalist theory, views imperialism as one possible form of organisational hierarchy. Emphasis is placed on the explanation of why the particular organisation of hierarchical interaction in imperial systems, for instance as a means of protecting investments from local elite access, is superior for the attainment of goals in specific situations than others such as confederations, protectorates or state-to-state relations (Frieden 1994; Lake 2001, 7233).

As Doyle (1986, 28) has pointed out, there exist numerous historical examples that would fit mostly metrocentric, pericentric as well as systemic explanations for the sources of their imperialism. However, in view of the complex interaction of military, economic, socio-political and cultural factors within expansive states and their peripheries as well as between them, most recent explanations of imperialism propose the interconnection of determinative factors in central and peripheral societies as well as their inter-relations in the context of multi-actor international systems.

The sources of Hittite imperialism have received only passing attention in works of Hittite history and culture. Early comments embraced elements of dispositional,

metrocentric explanations for expansion. Goetze (1928, 13 cf. Gurney 1979, 152), for instance, initially envisaged Hittite imperialism to be a quasi innate drive connected with Indo-European migrations in earlier centuries. Otten (1963 cf. Gurney 1979, 154), inspired by a passage in the Telipinu Edict "[*e*]*r machte sie* [*die Länder*] *zu Grenzen des Meeres*" ("he made them [the lands] borderlands of the sea" Hoffmann 1984, 13), proposed that the attainment of maritime borders was a natural goal of the Hittite state. In a later comment, Goetze (1975) reverted to a more economic explanation for the conquest of northern Syria and the strategic advantages the domination of this crucial hub of East Mediterranean commerce entailed for the Hittite state. Gurney (1979, 163), takes on board underlying economic motives for the conquest of Syria, but he upholds a dispositional argument, taken directly from Hittite elite ideology, as the ultimate drive behind expansion. Other commentators have tended to stress the securing of resources for Hittite expansion particularly into Syria. Macqueen (1986, 41-3; Bryce 1998, 85-6), for instance, proposed a shortage of tin on the central Anatolian plateau following the collapse of the Old Assyrian merchant network as one reason for expansion. Gorny (1995a, 71), from a systemic perspective, sees the Hittite state rise out of a phase of intense inter-polity conflict on the central plateau. Security considerations such as the creation of buffer-zones, particularly to the west, have also been put forward as a source of Hittite imperialism (Bryce 1998, 49-50). A model encompassing multiple economic, ideological and political/military variables is likely to come closest to the past dynamics leading up to and furthering decisions and actions taken by high-level political and military elites as well as subsequent domino-effects not necessarily intended by or under the control of those same individuals that led to Hittite state formation, already a form of imperialism, and subsequent spurs to enlargement.

2.1.1.2. The Lifecycles of Empires

2.1.1.2.1. The Mechanisms of Expansion

Imperial development is typically, but not necessarily, embedded in a general sequence of expansion, consolidation/integration and collapse (Sinopoli 1994; Taagepera 1978a, b). The first stage of imperial expansion is generally of a military nature. Traditional warfare, however, is a logistically highly straining method of expansion and Luttwak (1976) has pointed out that the most tactical use of military power is in fact not military but political, as numerous cross-cultural historical sources, including the Hittite, confirm. The political dimension of military power is defined not by the actual physical strength of the imperial army but, through the proliferation of precedents of its power or cruelty, by peripheral perceptions of it. Coercive persuasion or diplomacy (Luttwak 1976; Mann 1986, 142; D'Altroy 1992, 11) was, therefore, an important imperial strategy of enlargement as well as government, especially with settled, urban societies, which were too weak to counter militarily but were also unable to implement tactics of physical removal available to more mobile groups.

Military campaigns and the conquests of polities, violently or through coercive persuasion, which form the primary subject of Hittite "historiographic" works, were relatively rapid events often completed within a single campaign season. Archaeologically, this first stage in the establishment of imperial relationships is difficult to access because of the coarseness of most archaeological chronologies (Schreiber 2001, 71-2; Sinopoli 1994, 167) and the arguably low probability of specific historical events leaving not only substantial, but also definitively recognisable, archaeological imprints at excavated sites. The most obvious candidates for such correlations are destruction horizons which fall into the chronological ranges of historical accounts of imperial conquests; or those of enemy forces during imperial collapse. Such associations, however, may be made convincingly only in very rare instances (e.g. Stronach 1997) and most cases made for LBA Anatolia (e.g. Bittel 1977; 1983, 26-31;

Bittel and Naumann 1952, 27-29; Fischer 1963, 21-27; Neve 1999, 12-13; Korbel 1985, 122) are questionable on various accounts (Seeher 2001b; Schoop 2003a). Seeher (2001b), for instance, in a recent article on the final years of the Hittite capital city, forcefully demonstrated that the flamboyant doomsday scenarios of past commentators, induced by reports of Sea-Peoples raids on the Mediterranean coast and assumed Kaska attacks from the north, determinately ignored clear archaeological evidence for an abandonment of the city by the royal court and resulting dilapidation of the official structures rather than for a simultaneous destruction by a large-scale enemy attack.

2.1.1.2.2. The Limits of Expansion and the Seeds of Collapse

Imperial expansion has definable spatial limits, which are determined by the capacity for military conquest and subsequent forms of political and economic integration available to central elites (e.g. Lattimore 1962; Luttwak 1976; Mann 1986, 9-10; 137-40). The logistical limitations imposed by pre-modern transport and communication technologies theoretically confined the marching distances of an army such as the Hittite to a radius of approximately 90 km in campaigns where no supply could be obtained *en route* (Mann 1986, 10; 137-140; Lattimore 1962, 477-79). Real-life conditions, however, were generally more favourable and with the possibility of gathering supply during campaigns, historical armies could cover considerably longer, albeit only linear, marching distances. Concentrated military presence, either for conquest or as a means of governance, could only be extended forcefully in one direction at a time and decreasing rapidly with distance from the source. The narrow spatial limits of these armies severely affected the core's capacity to implement political control in conquered territories (Mann 1986, 142). This problem is clearly recounted in Hittite textual sources, which describe the relentless hastening of successive great kings and their armies from one trouble spot to the next, covering large geographical spans.

For these reasons, early empires have tended to assume a more or less territorially contiguous ground plan (e.g. D'Altroy 1992, 37), with successive sets of neighbouring regions being brought within imperial reach. The results of processes of expansion and integration, however, in practice did not take the form of concentric radii of decreasing spatial extent as Lattimore (1962, 480-383) proposed at least on a theoretical level. Topography, socio-political organisation of prospective subject populations and their inclination to accept imperial rule, and the geographical distribution of strategic resources are only some of the parameters shaping imperial geographies. Depending on these conditions, areas of little strategic interest could be bypassed in favour of more distant resources (e.g. Sinopoli 1994, 163), but land-locked cores such as the Hittite could not afford to be territorially cut off from their subjects and had to keep open at least corridors of contact with strategic peripheries. As we shall see in Chapter 6, there is archaeological evidence for Hittite as well as local strategies to appropriate both access routes and boundaries between the imperial centre and its surrounding regions.

The focus of the Hittite accounts on the recurrent necessity of military action in previously conquered regions, despite their ideological purpose of royal glorification, not only point to a major strategy of Hittite expansion and rule, but to an inherent fragility of early state and imperial systems and their difficulties in implementing territorially continuous effective control. Cowgill, for instance, called attention to the fact that early states, far from running smoothly, were structures wrought with problems of all kinds and

> ...even in their best days, nearly all states have probably been quite ramshackle contraptions, at best half understood by the various people who made them, maintained them, coped with them, and struggled against them.
>
> (Cowgill 1988, 253-54; also Mann 1986; Doyle 1986)

Neither centres nor peripheries of early states and empires were homogenous wholes, but rather they were made up of groups and individuals pursuing different interests and whose actions had unintended consequences both for the reproduction of existing systems of control as well as their transformations (Giddens 1979, 76-78). This heterarchic view of complex societies and the factional distribution of and struggle for social power within them have received increased consideration in archaeological thinking in recent years, including Western Asian studies (Stein 1998; Yoffee 2005). Adams (1979b, 401), more than twenty years ago, pointed out that even imperial homelands were often themselves the product of a process of imperial expansion and consolidation (Gorny 1995a). Factional competition in the form of dynastic struggles among the royal family and leading aristocracy is well documented in Hittite written sources, where a fair amount of great kings were usurpers to the throne (e.g. Edict of Telipinu (Hoffmann 1984)). This, however, should not deflect from the existence of *real* dominance relationships within imperial centres as well as between the dominant central elites and surrounding societies or their socio-politically most assertive groups.

A related aspect and augmenting factor in the factionality and instability of early states and empires is the power-political and economic spin-offs that commence with the decentralising transition from military conquest to integration and political control. Domestic instability both in the centre and its socially complex subordinate polities stems, on the one hand from the increasing "stress" of large-scale systems and, on the other, from the economic and political struggle between the ruling/imperial apparatus and more traditional elites and their power-bases (Eisenstadt 1963; Mann 1986; Dark 1998, 129). At an imperial level, the inevitable diffusion of power in the form of provincial administration away from the conquering army and its great king is one effect of this process. This dialectic between centralising and decentralising social and political forces, which is initiated by imperial policies of integration, may ultimately contain the seeds of collapse of the political system (Cowgill 1988; Yoffee 2005, 38).

2.1.1.2.3. Imperial Collapse

Collapse as the final stage of individual imperial development, but as a recurrent element in the evolutionary dynamics of states and civilisations, can take a number of forms ranging from political transformations such as fragmentation or incorporation into a larger system to wide-ranging societal or civilisational decline (papers in Yoffee and Cowgill 1988). Similar to imperial expansion, potential reasons for collapse are numerous, with explanatory models focusing on either external - foreign intruders, break down of international trade, environmental conditions - or internal factors - diminishing economic returns (Tainter 1988), over centralisation, failure of political integration, internal conflicts or a combination thereof (Sinopoli 1994, 168-169 for a summary).

A number of factors has been put forward to explain the disintegration of the Hittite state, which occurred in tandem with other large-scale transformations across the East Mediterranean region, and is followed by wide-ranging societal and cultural change. Earlier explanations of the downfall of the Hittite polity have tended to draw upon external factors from migratory movements along the Mediterranean coast and attacks from the Pontic regions (Macqueen 1986, 50-52; Drews 1993 for a wider view). These would have dealt the final blow to an already waning empire, which experienced increasing decentralisation at the hands of its viceroys and appendage rulers (Bryce 1998, 374-379) and which was weakened by disease and adverse environmental conditions for which there is both tentative scientific (Gorny 1989, 51-53; Thompson 2003), circumstantial archaeological (Matthews 2002) and textual evidence (e.g. Bryce 1998, 356-358). Like initial expansion, political collapse may be a relatively rapid event that is difficult to pinpoint precisely with archaeological methods; and similar to imperial conquest, destruction horizons are the likely candidate for attempts of correlation (see above). Although detailed archaeological investigation may be able to document the downward spiral of a deteriorating economy or ecological disasters, research of this

kind is only in its infancy. The text-based theories of a failing East Mediterranean economic system dependent on long-distance trade by Liverani (1987) and Zaccagnini (1990) for northern Syria, for instance, have recently been challenged on archaeological grounds (Bell 2005).

Regarding the relatively short time-spans involved in imperial expansion and collapse and the difficulties this poses for the documentation of their material expressions (Sinopoli 1994; Schreiber 2001, 71), archaeological methods are most effective for the uncovering of longer-term inter-regional relationships that become formalised and are perpetuated and negotiated during the middle stages of imperial development: the phase of consolidation and integration. The Hittite state and empire, as known from textual accounts, although clearly conforming to the overall pattern of expansion, consolidation and decline, went through cyclic periods of loss and re-gain of territory in several regions, thus rendering the transitions from one to the next developmental stage imprecise in many areas. However, it is during this general phase, delimited at its start by state formation and major expansive spurs (1650 BC and again around 1400 BC) and at its end by the collapse of the state apparatus (1200/1180 BC) that imperial elites can be expected to have implemented, or at least attempted to do so, a variety of strategies of control and exploitation. It is also in this phase that other types of inter-regional relationships, including processes of cultural transfer, are likely to have been most pronounced.

The archaeological data categories examined in this thesis are expressions and consequences of both imperial strategies of control as well as causally wider-ranging processes of contact and interaction. The analytical models outlined in the following section are most readily suited for the conceptualisation, assessment and definition of the nature and intensity of those aspects of inter-regional relationships that are

expressed through the cultural, spatial, administrative and ideological channels examined in Chapters 4, 5 and 6.

2.2. Modelling Empires and Inter-Regional Relations

Imperial relationships are defined to a large extent by the degree and kind of domination an empire chose or was able to exert over peripheral areas. Interaction at this level can be expected to have been asymmetrical. Imperialism, like all power-relationships, however, is a dialectical process involving not only an omnipotent and/or parasitic core, which some theories emphasise (Ekholm and Friedman 1979; critiques in Doyle 1986, 19; Mann 1986, 146-49; Wolfe 1997, 396; Schreiber 2005, 237-238), but also a periphery that potentially has access to various means of resistance and negotiation (Miller and Tilley 1984, 7; Scott 1990). The temporal component of imperial development is of importance in that relationships of control may at times be more strongly dominated by the central polity and at others leave open possibilities for regional resistance or negotiation. Another potential source of power for subordinated societies is their location at the intersection of two or more power centres. Kohl (1987, 20-21), for instance, has pointed out that in Western Asian cases "...peripheries situated between cores are far from helpless in dictating the terms of exchange". Conversely, all relationships of domination, according to Weber (1978, 212), involve a minimum of voluntary compliance induced by an interest in obedience, which is motivated either by genuine acceptance or ulterior motives. Thus, besides a basic level of interest in self-preservation on the part of the subordinated society, Galtung (1980, 437; my emphasis), in his structural theory of imperialism, defines it as

> ... a sophisticated type of dominance relation, which cuts across nations, basing itself on a bridgehead which the center of the Center nation establishes in the center of the Periphery nation, *for the joint benefit of both.*

Empire, therefore, is best perceived as a bi- or multi-lateral relationship that depends not only on the expanding society and its leadership but also on conditions in its

constituent and surrounding regions as well as the wider international system. Doyle (1986, 46) has defined imperial relationships as dependent on the interaction of the following four resources:

- the metropolitan regime (its capacities and interests),
- the peripheral political society (its interests and weaknesses),
- the transnational system (its weaknesses) and
- the international system and the incentives it creates.

A case in point for different combinations of these four factors in the shaping of imperial relationships is LBA Egypt. Egyptian ambitions and strategies of control differed significantly in the two main regions it extended its imperialism to. Egypt's long-standing interest in Nubia lay in the exploitation of the latter's resources and military conquest was followed by direct domination via a viceroy that included the imposition an Egyptian infrastructure (Morkot 2001). The complex web of feuding petty kingdoms of the Levant on the other hand were controlled in much less direct a way, as their political organisation and respective military weakness allowed or necessitated hegemonic strategies in addition to a number of Egyptian outposts (Higginbotham 2000, 71-72). Egypt's main interest in this region was mostly in the exploitation of long-distance trade (Redford 1993, 193).

Various models have been put forward to conceptualise the spectrum of possible connections between these four dimensions. Two theoretical paradigms have been popular with archaeologists in the past, primarily because of the inherent materiality and spatial expressiveness of both the articulations of asymmetrical relationships of political and/or economic power and their predicted consequences for the central society, but particularly for incorporated regions. The two models are interrelated, but they focus analytical attention on different aspects of imperial formations and their internal and external relationships. The first, a core/periphery perspective, allows the

conceptualisation of the scope, direction and intensity of hierarchical relationships in a broadened spatial unit of analysis. A second, the hegemonic/territorial model, presents a tool for the qualitative differentiation between types of asymmetrical relationships and for the formulation of basic expectations about the intensity and, thus material visibility, of effective control in peripheral locations.

2.2.1. A Core/Periphery Perspective

The structuralist division of the world into cores/centres and peripheries (and semi-peripheries) as a principle of hierarchical organisation of inter-regional relations is commonly referred to in archaeological theory for the modelling of large-scale interaction systems and long-term social and cultural change (e.g. Champion 1989; Rowlands, Larsen and Kristiansen 1987; D'Altroy 1992; Hall and Chase Dunn 1996; Dark 1998, 20, 86-89). Reasons for archaeological popularity are the inherently spatial perspective of this concept and the interpretive framework it provides for the analysis of material culture patterns beyond traditional archaeological units of exploration (Peregrine 1996, 2-3). It is a way of conceptualising developments in local economic, social and cultural spheres through the dynamics of long-distance interaction.

The most influential work with respect to archaeological theory has been Wallerstein's (1974) *The Modern World System I: Capitalist Agriculture and the Origins of the European World-Economy in the Sixteenth Century.* World-Systems theory as initially presented by Wallerstein (1974, 3-4) is concerned with the explanation of social change particularly after the 16th century AD through economic interdependence. Applications of the original model to pre-industrial societies have been criticised and modified for archaeological purposes over the last four decades. Principally, the restriction of Wallerstein's framework to capitalist markets and within them to the exchange of bulk commodities, alongside the strict structural distinction between cores, peripheries (and semi-peripheries), and the expectation of their respective over- and

under-developments did not sit well with pre- and early historic societies (Schneider 1977; Kohl 1987; Chase-Dunn and Hall 1991; Sherratt and Sherratt 1991; Hall and Chase-Dunn 1996; Peregrine 1996; Stein 1998).

In the context of LBA Anatolia and Western Asia in general a modified core/periphery concept presents a valuable framework for the perception and analysis of the inter-regional relationships between what is quite clearly a political and military core region with surrounding socio-political entities of varying complexity, military strength and economic potential. A peer-polity model (Renfrew and Cherry 1986) may be more appropriate for the period leading up to and shortly after Hittite state formation but except for the international system of competing imperial cores, this is not an appropriate frame of reference for the relationships internal to the Hittite imperial entity.

The adaptation of core/periphery models to better suit the requirements of pre-capitalist modes of hierarchical interaction necessitated a departure from an economically deterministic perspective to the development of a concept of heuristic, rather than predictive, value for the developmental dynamics of both cores and peripheries, although some would still disagree (Dietler 1998 cf. Schreiber 2005, 238-239). In the wider context of social theory, Giddens (1979, 1986) and others (Bourdieu 1977) have moved away from the determinism of structuralist theory in an attempt to allow for individual and group agency to modify structures through their practices. Enlarging this perspective, empires may also be conceptualised not as fixed structural arrangements but as networks of interaction on a variety of levels in which aspects of both the core and the periphery undergo transformations and in which their relationships are constantly re-negotiated (D'Altroy 1992, 16-17; Schreiber 2005). Hall and Chase-Dunn have proposed the following re-definition of world-systems as

> ...'core/periphery structures' representing 'intersocietal networks' in which the interactions (e.g., trade, warfare, intermarriage, [information, etc.]) are important for the reproduction of the internal structures of the composite units and importantly affect changes which occur in these local structures.
>
> (Hall and Chase-Dunn 1996, 12-13)

Although economic interdependence is still a defining feature of core/periphery structures (Peregrine 1996, 1), the organisational importance of political and military interaction has been recognised for pre-industrial networks of interdependence (already Lattimore 1962). Exchange networks of goods, or information/ideology are viewed as one of several bounding mechanisms with differential spatial scopes (Hall and Chase-Dunn 1996, 14). The range of possible relationships between imperial institutions and incorporated societies may span a wide spectrum of possibilities, but by the very nature of imperialism they fall into the category of core/periphery hierarchies (Chase-Dunn and Hall 1991, 7), and in the case of LBA empires in the primarily tributary "mode of accumulation" (Chase-Dunn and Hall 1991; Hall and Chase-Dunn 1996, 16).

In this way, empires, when reviewed from a modern liberal perspective of states (Mann 1986, 147) have tended to be characterised as parasitic, as a political mechanism for the extraction of revenue from peripheral regions and channelling it towards the centre (Wallerstein 1974, 15-16; Diakonoff 1969 cf. Mann 1986, 147; Adams 1979b; Larsen 1979b; Ekholm and Friedman 1979). Imperial imposition clearly involved the coercive exploitation of incorporated populations for economic and demographic gain, with deep consequences for affected societies, particularly at the producing end of the social spectrum. Mann (1986, 147-8), however, has also pointed out that in early complex societies, economic development and state control are closely interrelated. Albeit exploitative and coercively organised, states and early empires initiated and underwrote economic development through the spin-offs from military activities and pacification, the authoritative institution of value on goods important to the political

economy, the intensification of labour and the diffusion and exchange of technologies through conquest. From this perspective, we may expect changes in peripheral socio-economic organisation to meet imperial tributary demands, but also perhaps signs of increasing wealth and population densities in regions taking part in imperial economic systems.

Economic relationships between different parts of Anatolia and north-Syria with the Hittite core region are difficult to assess through traditional archaeological approaches due to an apparent preference for metals and textiles as tributes (RS 17.227 Nougayrol 1956) that are subject to decay and recycling, as well as a low density of imported manufactured goods that can be traced to a foreign origin at the imperial capital (Kozal 2003; Genz 2006; equally small quantities of NCA objects are known from neighbouring regions – Cline 1991).

In the case of LBA Anatolia, the core/periphery model is of relevance to the question of cultural influence and intensity of interaction in relation to the spread of the NCA ceramic tradition (Chapter 4). Core/periphery relationships assume a degree of asymmetry between exchange partners, whether in the sphere of economic, military or technological prowess, but they do not necessarily involve formalised political and military control. In this way, it provides a theoretical path around the problematic identification of imperial control *per se* on the basis of archaeological evidence.

Taking account of the logistical limitations faced by pre-industrial societies and their resultant spatial restrictions, a core/periphery perspective predicts the movement of goods and people between various peripheries and one central area, more substantially in the core's direction, as well as the interchange of cultural ideas and practices along the same channels. Either processes may be of much more wide-ranging geographical scope than the limits of political or military control, particularly in a

multi-centric system such as the LBA Western Asian, while at the same time not all levels of inter-regional interaction are state controlled. Nonetheless, regions under a particular core's sway are likely to interact more intensively with the central region and therefore come into contact with and adopt aspects of its culture more readily than societies with less comprehensive ties. The appearance of material culture elements and related practices in local societies, however, are not necessarily, and never simply, an expression of core dominance and its ability to modify subordinate socio-cultural structures. Rather, they depend on the intensity of the dominance relationship, imperial and local agendas (Schreiber 2005). The absence of cultural interest in the face of other evidence for effective control is clearly also a sign of local choice – and quite possibly of resistance.

2.2.2. The Hegemonic/Territorial Model

The hegemonic/territorial model can be used for the analysis of the nature and intensity of imperial relationships. Similar to the core-periphery model the focus of this theoretical perspective is the central polity or the metropolitan regime, its capacities and interests (Doyle 1986, 46). To attain effective control over a territory and to exploit its resources, i.e. to enter into, and maintain, an imperial relationship with a periphery – and to some extent to resist such a process - , strategies of domination and exploitation draw on a series of resources in military, political, economic and ideological spheres. The varying accessibility or perception of availability of these sources of power to the imperial (and local) polity, together with the differential organisational qualities (intensive/extensive and authoritative/diffused) each source of power entails (Mann 1986), have tended to produce a broad spectrum of historical strategies of imperial control and local responses to them. The polar opposites in this qualitative as well as temporal continuum of possible imperial relationships may be summarised as direct and indirect forms of domination, which involve the forging of qualitatively distinct political/administrative and economic ties between the imperial core and its various

subject territories (Luttwak 1976: hegemonic versus territorial; Eisenstadt 1963: patrimonial vs. imperial-bureaucratic; Mann 1986: empires of domination vs. territorial empires; Doyle 1986: formal vs. informal).

The basic difference between these two modes of domination lies in the depth of imperial involvement in conquered regions with each having its strategic and economic advantages and disadvantages as well as implications for archaeological recovery. Indirect domination entails the exertion of control over peripheral elites, who mostly retain hegemony within their domains but are politically dependent on the imperial core (e.g. Doyle 1986, 135). To a large degree, domestic policy and the organisation of economic exploitation are left in the hands of such elites, who are expected to deliver regular tribute payments to the centre. This method of rule minimises administrative effort and economic expenditure for the imperial core through the establishment of an additional hierarchical tier onto already existing local administrative and economic structures (Galtung's 1980 model). The political nature of such dependency relations is reinforced by the undercurrent threat of military retribution. Under regimes of direct rule, conquered regions are turned into provinces headed by governors, and taxes rather than tribute are extracted. In contrast to the majority of indirect modes of control, direct or territorial dominance usually involves the reinvestment of tax revenues into the development of an infrastructure and defence mechanisms that facilitate the implementation of imperial policy on practical levels of administration but also the proliferation of ideological messages and cultural influence (Sinopoli 1994, 163-168; also Feinman 1998).

The choice between one or the other mode of domination is influenced by a number of central, peripheral and external factors (Doyle 1986). Two principal concerns appear to have governed the decision making of imperial elites and shaped the organisation of imperial-local relationships: (1) the security of the core polity and (2) the extraction of

resources from conquered territories (Adams 1979a; D'Altroy 1992). Indirect rule provides comparatively cheap protection from external threats as well as cost-effective extraction of resources (Luttwak 1976). The downsides are the limited control over indirectly ruled elites and the danger of internal revolts. Conversely, direct control, in taking security questions into central hands, avoids constant threats of revolt to some degree. The costs of a continuous territorial empire, however, are difficult to manage because of the large amount of tax revenue that has to be re-invested in the organisation and defence of outer provinces. The delegation of control away from the imperial army and its commander in chief, in either case, reinforced centripetal dynamics (Mann 1986, 144-145).

Recent criticisms of the hegemonic/territorial model have focused on the problem of a static dichotomy between the two forms of control. As in all relationships, different forms of effective control are constantly negotiated, historically contingent relations, which may develop from one form of control into another (D'Altroy 1992, 16; Sinopoli 1994, 2), or as Schreiber (2005) has recently put it, different imperial agendas dictate strategies of control, from military conquest via political control to a shift in focus on economic considerations. A transformation of indirectly ruled peripheries into directly governed provinces is often an implicit expectation, but historical instances have shown that centres may also choose to reduce the amount of direct control over particular provinces for economic or other strategic reasons (e.g. Larsen 1979b, 93; Postgate 1992, 251-257; Hassig 1985, 100; Sinopoli 1994, 164-65). A diachronic perspective that considers pre- as well as post-conquest regional situations is, thus, of paramount importance for the understanding of the depth of time necessary for the development of imperial and other inter-regional relationships and their transformations. Real qualitative differences however also exist among regional relations which may remain relatively constant over time within the broad parameters of each type of control.

On a practical level, the gradation from territorial rule to hegemonic strategies was strongly influenced by the parameter of distance and the available technologies of communication and transportation to overcome it (Mann 1986; Taagepera 1987a, b). Peripheral factors include the socio-political make up of local groups and whether indirect rule, which is encapsulated in the political relationship between the imperial leader and his provincial counterpart, could be borne out by local socio-political complexity. As we shall see in the following chapters, this posed a particular problem to the imposition of Hittite imperial control over acephalous and mobile tribal federations to the north and north-east of the central region (Schuler 1965; Glatz and Matthews 2005) and to a lesser extent over regions with sedentary groups, governed by traditional councils of elders.

The hegemonic/territorial model is noteworthy in that it is an archaeological approach which provides generalised predictions for the types and the intensity of imperial involvement in subordinated regions and its impact on the material record of affected areas. Direct and indirect forms of domination incorporate material culture elements in different ways and to varying degrees and, therefore, tend to leave qualitatively and quantitatively different traces in the archaeological record (Sinopoli 1994, 169; Smith and Montiel 2001, 254). Working with archaeological data, this framework is most successful in the identification of direct, territorial integration that may involve large numbers of imperial personnel, distinct material culture elements such as monumental architecture as well as the reorganisation of regional political and economic structures. It aids rather less effectively in the identification of indirect or hegemonic rule for which tangible material evidence can be less directly correlated with imperial sources and may amount to little more in *obvious* material culture terms than the clay tablets containing the treaties binding vassal to overlord such as in the case of Ugarit.

2.3. Archaeological Approaches to Contact, Interaction and Imperial Control

The main difficulty for an archaeological approach to these questions lies in the qualitative differentiation between types of inter-regional interaction that may have ranged from mere contact, to interaction on symmetrical or asymmetrical grounds, and to outright imperial control, on the basis of material (culture) patterns and their transformations. The establishment of a connection between past behavioural dynamics with the partial perspectives of the material record is the most basic of problems in archaeological interpretation; and the analysis of complex political structures is a particular case in point. Conventionally, aspects of a society's economic, social and cultural organisation and development are perceived as more tangibly represented in the archaeological record than political structures *per se*; in particular those that involve the incorporation of culturally and socially diverse groups (e.g. Postgate 1994a, 3; Barfield 2001, 32; Smith and Montiel 2001, 246; Matthews 2003, 13; Parker 2003, 525).

In the past decade, archaeologists have developed what might be called a "diagnostic" (Morrison 2001, 3) methodology for the recognition of imperial formations through material culture elements. This approach involves the formulation of "ground plans" of archetypical empires (Sinopoli 1994; Flannery 1998; Smith and Montiel 2001, Table 1; Matthews 2003, Table 5.1) based on the behavioural and material characteristics of well-documented examples such as the Roman, that have strong territorial components. Not all imperial formations share the same characteristics and state-level societies may also display a limited range of the same attributes (Smith and Montiel 2001, 247; Matthews 2003, 128). Through their material focus, generic "ground plans" present useful starting points for the archaeological identification of the most prominent material remnants of empire, particularly in cases where this forms the primary research question. At the same time, however, they harbour the danger of a tick-list

approach and the reduction of both material evidence to static "reflections of empire" and of complex dominance relationships to what is, for the most part, also a core-centric perspective.

> Archaeological research into expanding states and empires has typically made two critical errors. First, the state is often treated as a single, monolithic entity, rather than as a complex entity with multiple, and even competing, agendas. Second, indigenous groups conquered or otherwise consolidated within the state enterprise often have been treated as being uncreative and passive, simply receiving and accepting the control of the so-called dominant society.
>
> (Schreiber 2005, 237)

Taking up a similar stance to Schreiber (2005), I regard the archaeological record as capable of revealing multiple agendas within and between both imperial and local societies in addition to the attribution of an active role of subordinated groups in the shaping of specific inter-regional relationships. A more nuanced approach to such relations of varying asymmetries and their dynamics within and beyond imperial settings requires a more fundamental level of abstraction on the one hand and more sophisticated archaeological research strategies on the other.

A materially focused approach, along the lines of theories of practice (Bourdieu 1977; Giddens 1979, 1986), to inter-regional relations in the context of imperial formations may be achieved through a diachronic perspective on virtually any type of social, economic or cultural praxis at various social levels and spatial scales from individual households to settlement systems. From this perspective, the socio-political, economic and cultural transformations associated with contact, interaction and integration are not only likely to manifest themselves materially but material culture can be expected to form the active media or tools for the re-negotiation and expression of new socio-political, economic and cultural circumstances. This applies to direct/territorial types of control but also to hegemonic/indirect strategies as well as to local behaviors and responses to imperialism.

To return to the case of Ugarit, imperial relationships may be most personally expressed in textually recorded and legalised submissions of a vassal ruler to an imperial overlord in place of an entire population. The most immediate material element for such political and personalised domination is the clay tablet, which, in the Hittite case at least, contains a detailed code of conduct, laying down the praxis of submission required by the imperial overlord. This included regularised correspondences between vassal and overlord and annual visits of the subject king to the capital city, as well as an annual tribute of mostly prestige goods but also, and in addition to it, formalised gift-exchange at diplomatic occasions. Ugarit was required to deliver altogether ca. 560 shekels (ca. 6.2kg - van den Hout 1990, 525-527 on Hittite metrology) of gold, gold bowls, large numbers of garments and purple dyed wool annually to the royal court (compared to 300 shekels, ca. 3.6 kg, payable by Ugarit's neighbour Amurru) (Bryce 1998, 51; Nougayrol 1956, 40-44; Beckman 1996, 151-154). Payments of this magnitude, even for a wealthy trading city, must have imposed a noticeable strain on the local economy, as precious metals as well as wool and other fibres would have had to be procured and processed.

Alternative archaeological avenues to glean the material effects of increased state exploitation and responses to these would be the diachronic investigation of textile production and other specialised crafts as well as the social changes associated with an increase in productive requirements and heightened state-related and private trading ventures. It is from this perspective, perhaps, that we might be able to approach the explanation of Ugarit's economic flourishing in the second part of the LBA from an alternative angle, namely that of responses to imperial economic pressure.

While numerous studies of New World empires have illuminated provincial socio-political and economic transformations to meet direct imperial demands or to channel goods into exchange systems in order to acquire raw materials for processing (e.g.

Costin et al. 1989; D'Altroy 1992, 21; papers in Malpass 1993), such approaches are comparatively rare in Western Asian contexts partially due to the lack of relevant archaeological data. At present, an archaeological approach to inter-regional relations in LBA Anatolia has to revert to the data categories currently available in the public domain. As set out in Chapter 1, these allow the reconstruction of large-scale trends or "changing archaeological profiles" (Parker 2003, 528) of regional units at different socio-political and cultural levels. Pottery traditions, settlement patterns, administrative technologies and practices as well as landscape monuments formed part of inter-regional relationships as material objects, present ideological and cultural symbols of, or are likely to have undergone transformation as part or the consequences of strategies of imperialism. Through the superimposition of the geographical and chronological patterns of continuity and change in these categories of archaeological data (Chapter 7), we can expect to begin to gain an understanding of the different networks of cultural, political, economic and ideological relationships that existed between a political and militarily central region and its surrounding, occasionally subordinate, societies.

2.3.1. Contact, Interaction and Control – Some Expectations

Drawing on the above theoretical and methodological considerations, expectations about the likely archaeological patterns of inter-regional contact, asymmetrical interaction and imperial control can be formulated on the basis of the four data categories selected for analysis. In very general terms, the most convincing case of imperial control can be made for regions displaying signs of integration in the cultural, spatial-political, administrative and ideological spheres. The absence of such interaction, particularly of political-administrative evidence, is likely to indicate a lack of formalised ties, and arguably, therefore, of imperial control.

2.3.1.1. Inter-Regional Interaction

Examined in more detail, the spread of NCA ceramic evidence to surrounding regions is viewed here as a marker primarily of cultural ties, whose intensity may be a measure of the degree of inter-regional interaction. Many commentators have assumed either a general or direct relationship between Hittite state administration or normative economic strategies and this ceramic phenomenon (e.g. Garstang 1953, 141-142; Goldman 1956, 350; Burney 1980, 165; Macqueen 1986, 105; Gunter 1991, 105; 2006, 360-361; Henrickson 2002; Gates 2001, 141; 2006, 308; Symington 2001; Müller-Karpe 2002b, 257; Müller 2005; Postgate 2005; Jean 2006, 328-330). The analysis in Chapter 4 does not *a priori* suppose such a connection but examines on the basis of comparative and diachronic formal and technological investigations different possibilities for cultural transfer that include imperial formalisation, local cultural adoption and adaptation, as well as a potential redefinition of the value and use of utilitarian pottery in a much broader network of interaction. Regions, whose cultural orientation in preceding periods was not directed towards the NCA plateau, but whose LBA traditions display strong but not exclusive cultural ties with the imperial core region are more likely to have formed part of an intensive interaction system than those societies displaying little or no interest in central cultural elements at this fundamental social and cultural level of production and consumption.

Evidence for ceramic connections alone, however, is not enough to allow a conclusive identification of imperial control. Conversely, the absence of cultural ties of this type in areas with conclusive administrative or other evidence for contact may be suggestive of a deliberate local statement of rejection and cultural independence.

2.3.1.2. Territorial Control, Hegemony and "Intensive Hegemony"

Commencing from the theoretical premise that broad characteristics of socio-political and economic organisation are spatially and materially constituted, transformations in

the political and economic structures of affected societies can be expected to either manifest themselves in, or, alternatively, be driven by, changes in regional settlement systems and their hierarchical organisation. A causal connection between settlement change and imperial incorporation is, on its own, often difficult to argue conclusively. In tandem with other types of evidence for intensive cultural and high-level political interaction, however, a range of transformations in local settlement systems may be viewed as suggestive of imperial strategies of integration. From a cross-cultural perspective the imposition of direct imperial control should involve the transformation of regionally centred settlement systems existing side-by-side, to integration on a higher, cross-regional level; in addition to the nucleation and the imposition of central sites on lower tier regional hierarchies (Smith and Montiel 2001, Table 1; Matthews 2003, Table 5.1). Culturally specific evidence from the Hittite core region, as outlined in Chapter 3, furthermore suggests a decline of older central places, the establishment of new, planned settlements or old competitors taking up the task of regional administration. These new centres, however, are on average smaller than their MBA predecessors in regional power. Settlement trends echoing such developments may thus be a relatively clear indicator of strategies of direct control and a process of territorial integration.

Hegemonic control, on the other hand is less easily identifiable on the basis of spatial data. We might, however, expect a larger degree of settlement continuity with the reinforcement and centralisation of previous power-bases. The spatial scope of local centres should lie below that of the imperial capital. Heightened economic demand on production, as well as the increased security an imperial system might afford should result in the proliferation of sites at the lower end of the settlement hierarchy. The lack, and particularly the loss of defensive architecture of central settlements may be a further indication for the transition of locally held hegemony to that of a larger political entity (Gorny 1995a, 82).

The use of landscape monuments by both the imperial elite and local or decentralising agents can be expected to delineate a territory of intensive connections with the imperial core area as well as point out contested zones that required particular ideological attention.

The spatial and chronological distribution of administrative technology and practices, closely associated with the Hittite state apparatus presents a rather more clear-cut indication of high-level political interaction and potentially also the presence of imperial personnel at peripheral locations. At the same time, the adoption and use of imperial practices by local elites particularly by those located at the interface of imperial systems may be seen as indications of intense inter-regional connections at a high political level.

The investigations in the following chapters, however, will show that the majority of regions for which north-central Anatolian administrative evidence is attested appear otherwise to have stood under two distinct forms of hegemonic control; a text-book case of political control with little direct evidence of formalised interaction on the one hand, and a middle stage identifiable through relative settlement stability and increase in site numbers as well as selective cultural adoption and administrative involvement, which may be termed "intensive hegemony" on the other. This form of inter-regional connection between the imperial core and some of its surrounding areas, may in fact present one of the key elements of Hittite imperialism.

The material study of these different types of inter-regional relationships in LBA Anatolia and surrounding areas, as outlined in this and the previous chapter, promises to be most fruitful as part of an integrated, archaeological and textual, approach. The following Chapter 3 is concerned with the construction of such a perspective both for comparative and interpretive purposes.

CHAPTER 3: IMPERIAL ORGANISATION AND INTER-REGIONAL RELATIONS – AN INTEGRATED PERSPECTIVE

An integrated approach to the regional relationships of the Hittite empire necessitates, first and foremost, an appreciation of a series of issues relating to the nature of the archaeological and textual records, their complementary characteristics as well as the difficulties arising from falsely assumed, or uncritically accepted, overlaps between them. The second part of this chapter presents an overview of textually attested regional relationships between the Hittite core region and its surrounding societies. Embedded in this discussion is an examination of relevant archaeological and documentary sources for the reconstruction of the political and economic organisation of the imperial core region that serves as a comparative and interpretive framework for the archaeological patterns encountered in particularly the settlement analysis of Chapter 5.

3.1. THE PROBLEM OF "HITTITE" MATERIAL CULTURE

Among the major challenges facing an integrated approach is the striking of a balance of interpretive weight as well as a critical appreciation of our ability to interlock material patterns with the events of textual history. The first question to be asked in this context has to be "[b]y what criteria do we decide to classify something as Hittite?" (Gorny 2002, 2). It seems to warrant a rather obvious answer and has perhaps for this reason not received the attention it requires, but it is important both in a spatial context: "Where is the dividing line between Hittite and Anatolian?" (Gorny 2002, 2) and from a chronological perspective (Schoop 2003a, 172): when do we start/stop calling something Hittite?

This issue encompasses the concept of culture itself, its processes of transmission and adoption, and the nature of its interconnections with socio-political, economic, linguistic

and ethnic phenomena. While considerations along such lines are not new (Mellink 1956, 51-57; Güterbock 1957; Robinson unpublished manuscript) they are only slowly (re-)gaining currency in the study of Bronze Age Anatolia (Gorny 2002). In view of the "problematic understanding of the term Hittite" (Gorny 2002, 2) and the continued discourses in various academic disciplines about the ethnic, cultural and linguistic identity and political role of "the Hittites" prior to and after state formation, the following discussion sets out to deconstruct this concept and clarify the meaning of the terms which will be used in this thesis.

The disciplinary history of Hittite studies has been shaped by the social and cultural backgrounds and academic interests of 18th and 19th century adventurers and scholars. Egyptian and ancient Near Eastern texts supplied the first glimpses of ancient "peoples" and their languages and culture historical archaeology served as a tool for the identification of their distinct physical remnants. The sequence of discovery of "the Hittites" of the LBA from the decipherment of cuneiform scripts and Egyptian hieroglyphs to the first material discoveries of this society and its own textual sources (Bittel 1976, 13; Seeher 2002, 22) serves to explain in part the strong culture historical tendencies of Anatolian archaeology up until very recently.

The language known as "Hittite" in modern literature was referred to by its speakers as *nesili* or *nesumnili.* A problem of nomenclature arose with the discovery in 1922 by Emil Forrer of a non-Indo-European language denoted as *hattili* or Hattian in LBA texts alongside two additional Indo-European languages, Luwian (*luwili*) and Palaic (*palaumnili*), Hurrian (*hurili*), Akkadian (*babilili*), Sumerian and, in one instance, Indo-Iranian. The use of the term "Hittite" for the main language of the archives of Boğazköy-Hattusa, however, had been too well established for attempts to change it to the more correct "Nesite" to succeed (Melchert 2003, 15). Questions about the origins of Hittite, Luwian and Palaic speakers, their migration(s) to Anatolia and their geographical

locations and significance during the centuries prior to Hittite state formation have occupied scholars ever since.

A *terminus ante quem* and the only MBA evidence for the presence of Indo-European speakers in central Turkey is a number of personal and divine names and isolated lexemes associated with early forms of Hittite/Nesite and Luwian in Old Assyrian merchant texts (e.g. Steiner 1990, 150; Oettinger 2002, 52-53; Melchert 2003, 23). A broadly accepted linguistic geography of MBA Anatolia locates Hittite/Nesite speakers mainly in and around Kültepe-Kanes (Singer 1981, 126; Steiner 1981, 164; 1990, 197-198; Bryce 1998, 14-15; Melchert 2003, 21-22) on the south-east Anatolian plateau and Hattian in what later became the Hittite heartland around the city of Boğazköy-Hattus(a) (Singer 1981, 127). Luwian, at least in later periods appears to have been spoken in areas to the west, south and south-east of the central plateau (Melchert 2003, 11-12) and Palaic on its northern fringe in the area of classical Paphlagonia (Singer 1981, 119; Wilhelm 2002, 47; Melchert 2003, 10-11;). Hypotheses about the formation of this constellation are built largely on inferences from this tentative MBA situation (e.g. Renfrew 1987, 266-69; Steiner 1990, 186).

3.1.1. Ethnic and Linguistic Groups in Anatolia – The Material Perspective

Important for the present study is the often implicit equation of language communities with ethnically conscious, culturally expressive and even physically or racially distinct groups (Goetze 1957, 8-12) particularly in early interpretations and the way this draws archaeological materials into a discourse that is effectively outside its methodological reach.

As a consequence of this practice, archaeological sites and assemblages throughout Bronze Age Anatolia have been identified in the past as belonging, or owing their demise, to the migration and settlement of various textually attested peoples.

Beginning with the EBA, the richly furnished burial complexes at Alaca Höyük, Eskiyapar, Kalınkaya, Mahmatlar, Kayapınar and Horoztepe are often associated with the Hattians (Goetze 1957, 47; Akurgal 1962, 15; Özgüç 2002a, 39; Gorny 1989) or alternatively with the earliest Hittites (Bittel 1976, 54; Frankfort 1996, 211).

The differential geographical distributions of late EBA and early MBA pottery styles, such as the Intermediate and the Cappadocian/Alişar III wares, have been linked in various ways with Indo-European settlement in central Anatolia (e.g. Goetze 1957, 43-44; Akurgal 1962, 40; Fischer 1963, 104-105). It has become clear, however, that all EBA-MBA central Anatolian pottery types, with the exception of minor stylistic influences, are rooted in a long-standing local tradition. Furthermore, excavations have demonstrated that the different ceramic traditions coexisted at some sites and were subject to a process of gradual replacement rather than rapid cultural ruptures (Fischer 1963, 105-7; Emre 1963). Fischer, thus, cautions against an overhasty use of central Anatolian ceramic styles for the distinction between ethnic or political entities:

> *Sie* [*seine Auffassung* (his perception)] *mündet darin, in der kappadokischen und in der hethitischen Keramik kulturgeschichtliche Erscheinungen zu sehen, die von ethnischen oder gar politischen Bindungen weitgehend frei sind.*
>
> (Fischer 1963, 107)

A similar scale of continuity characterises central Anatolian domestic architecture and building techniques, while new developments, particularly in the form of monumental architecture, become more pronounced during the LBA (Naumann 1955, 422-430; Neve 1996; Schirmer 2002, 205; Schachner 2006).

Unsurprisingly then, Bronze Age Anatolian material culture has come to be viewed as "unproductive" (Steiner 1990, 187), "virtually nil" (Mellaart 1981, 139) for the identification of distinct linguistic/ethnic groups or the delineation of ethno-cultural boundaries. Such acknowledgements of the difficulty to match text-based constructs of

ethnic units with material culture distributions, however, are not a "failure" of the archaeological record. Rather, they stem from the inadequacy of a culture historical framework and its implicit primordialist expectations of habitual expression and differentiation of ethnicity (e.g. Shils 1957, 111-126; van den Berghe 1978; Geertz 1963, 109-199; Jones 1997).

3.1.2. Hittite Self-Defined Identity

Hittite identity as defined by the written sources was primarily geographical in nature. The first Hittite king attested through his own documents is Hattusili I. Originally titled "man of Kussara", he moved the centre of his dynasty to Boğazköy-Hattusa and adopted the name Hattusili, "man of Hattusa" (Bryce 1998, 73). Respective kings are referred to in Anatolian sources as LUGAL.GAL LUGAL KUR ^{URU}Hatti – "Great King, King of the Land of the City of Hattusa" (e.g. Apology of Hattusili III, Line 1. Otten 1981, 4-5; Deeds of Suppiluliuma, Line 1-2 Güterbock 1956, 59). In the Hittite law code distinctions are made between inhabitants of the Land of Hatti, "man of the Land of Hatti" (LÚ ^{URU}Hatti, Hoffner 1997, 30 §19b) and persons from, for instance, Luwiya (Hoffner 1997, 180-181 §19-23). Ample external recognition of this terminology comes from the Amarna and other international correspondences (EA 17, EA 35 in Moran 1992; Beckman 1996, 121- 23).

As far as the known text corpus of LBA Anatolia is concerned, no ethnic terminology is used by their authors to identify themselves, particularly none that would reflect an Indo-European origin (Bryce 1998, 18-19). Hittite self-defined identity, as portrayed by the texts, was based on a geographical-administrative unit with Hattusa as its focal point. Its inhabitants had rights and duties that set them apart from other parts of the kingdom/empire, such as differential treatment by the law, the duty of military service (Bryce 1998, 19), the payment of taxes from farmland and the provision of labour (Bryce 2002, 76).

3.1.3. "Hittite" Material Culture – A Working Definition

The conclusions to be drawn from this discussion are the existence of a deep-rooted cultural continuity between the LBA and the preceding periods on the one hand, and the inability to differentiate archaeologically, at least at present, between discrete ethnic or linguistic zones during either the MBA or the LBA. At the same time, LBA textual sources give no reason to suspect that ethnic and linguistic differences were among the major structuring principles of social interaction in this period.

I, thus, suggest that the use of the term "Hittite" is problematic not simply in terms of the definition of the boundaries of its applicability. In the light of the various linguistic and ethnic connotations over a century of research history have imposed on it, "Hittite" is an altogether unsuitable label for material culture. It is even more so for the description of locally produced material culture and settlement horizons in areas outside the central Anatolian plateau, where it acquires, explicitly or implicitly, an additional political and related ideological dimension; usually that of a conquering and, in one way or another, "civilising" imperial polity. More recent research into phenomena such as "Romanisation" or "Egyptianisation", however, have demonstrated the vital role of local perception of central culture, eclectic choice and transformation as part of provincial social and political strategies in processes of cultural adoption (e.g. Higginbotham 1996, 2000; Woolf 1998).

Mellink (1956, 51-57), a long time ago, suggested the term "Anatolian" for the Bronze Age horizons of Asia Minor. Just as "Minoan" or "Helladic" in the Aegean region are divided into three main phases and as many sub-divisions as needed, "Anatolian", she proposed, could be used in the same way. While achieving an essential departure from labels with inappropriate ethno-linguistic or political connotations, which in any case are not the general norm for the classification of material culture of Bronze Age Asia Minor

("Luwian" or "Arzawan" are not used in the same way as "Hittite"), "Anatolian" seems too general a term for the large geographical unit of Asia Minor, whose different regions are culturally diverse and do not run through developments simultaneously (e.g. Fischer 1963, 12). Fischer (1963, 12) has proposed the definition of a "Hittite" cultural area on the basis of the alleged "*koine*" of material culture and rock monuments across the central plateau during the Hittite Empire Period (14th and 13th centuries BC). This summary definition, however, glosses over a series of largely unexplored temporal and spatial processes related to the expansion of the Hittite political entity as well as the origins of many cultural traits in MBA and earlier traditions.

In this thesis, the geographical term "north-central Anatolian" (NCA) in association with chronological indicators such as LBA (LBA I and LBA II) will be used to refer to the material culture tradition of Boğazköy-Hattusa and other centres within and close to the bend of the river Kızılırmak, which has its roots in the MBA and to some extent the final EBA cultures of the same region. This area overlaps with the core region of the LBA political entity, the Land of Hatti, which is also the unit of geographical/political self-definition in the textual sources (Map 4). The label "Hittite" is henceforth reserved for the political entity and associated personnel. NCA material culture defines ceramic, architecture, etc., produced in this central region of the Hittite state and empire. For a site to be considered part of the NCA cultural tradition, several material culture classes have to show affinities of this kind. Artefacts produced in areas beyond this cultural region, which are either reminiscent of, or identical to, material culture produced in the centre, are referred to as "north-central Anatolian-style" (NCA-style).

This terminology does not presuppose any ethnic, linguistic or cultural affiliation of either the producers or the consumers of products described in this way. Neither is automatic Hittite political sovereignty over an area producing such material culture implied. It is part of the aim of this thesis to explore the nature and extent of material

culture similarities between the imperial core and its surrounding areas and the processes of influence and adoption they may be ascribed to. The following section defines these surrounding regions and explores their textually attested relationships with the central Hittite administration as a comparative element for the archaeological analyses in Chapters 4, 5 and 6.

3.2. Regions of Interaction

Despite widespread disagreement on the details of LBA Anatolian and north-Syrian historical geography, a more or less broad consensus exists about the arrangement of larger political units on the maps of Anatolia and neighbouring regions (Garstang and Gurney 1959; Forlanini and Marazzi 1986, TAV. XVI; Gurney 1992; Hawkins 1998). Taking account of Hittite political geography and topographic considerations I have divided Anatolia and areas that were, according to the textual sources, affected by Hittite imperialism into 11 units of analysis (Table 2 and Map 5). The boundaries imposed in this way are necessarily arbitrary to varying degrees due to the disputed or else unknown intricacies of Hittite historical geography and the territorial fluctuations of individual polities. The proposed regional subdivisions are, therefore, principally to be seen as analytical units, as a way of organising complexly intertwined data sets rather than to accurately reflect the spatial distribution of LBA political entities. The different modes of interaction between the Hittite imperial apparatus and these 11 regions is presented in a standardised format in Table 3 to Table 16, which permit the reconstruction of the nature and the intensity of imperial-local relationships in different regions for comparative purposes and the formulation of general expectations about their possible material expressions.

3.2.1. Region A

Region A encompasses the central Anatolian plateau, the wider cultural and political core region of the Hittite empire, established through the incorporation of various

independent polities in the period of state formation in the 17th and 16th centuries BC (e.g. Gorny 1995a). Region A1 covers the area encircled by the Kızılırmak River, the "Land of the City of Hattusa". For most of the LBA, Region A1 bordered hostile tribal groups in the north (B1). Its boundaries to the west are less clear but they seem to include a number of subordinate polities such as Kalasma and Pitassa (C1). To the east, A1 adjoins Region A2 (Upper Land) and to the south A3 (Lower Land) (Garstang and Gurney 1959, Map 1). The Upper Land (A2) took up the eastern part of the central plateau, reaching up until approximately the Yeşilırmak and the Kelkit Çay and somewhat to the south-east of the Kızılırmak, where it bordered mostly hostile peoples in the north (B1) and northeast (B2). In the east, the Upper Land adjoined a series of dependent polities, Tegarama, Tipiya, Istitina, Dankuwa and Ishupitta (G1). The Lower Land (Region A3) is broadly defined as the south-central Anatolian plateau, in particular the Konya plain. While attached to the Land of Hatti (A1) in the north-east, the boundaries of the Lower Land are not well defined geographically. To the south it adjoined the Hulaya River Land and later Tarhuntassa (E) and to the west parts of the Arzawa Lands (C2).

3.2.1.1. Hittite Historical Development

The geographical and chronological scope as well as the nature of inter-regional relationships between the Hittite central polity (Region A) and its surrounding areas will be discussed in detail below. A schematic overview of Hittite historical development is presented in Figure 3 (Appendix 1 for a discussion of LBA chronology) since a detailed narrative of textually attested events fills volumes of its own (most recently Bryce 1998; Klengel 1999).

3.2.2. Region B

Region B presents a contested and fluid border zone in the north and north-east of Regions A1 and A2, parts of which appear to have participated in MBA central

Anatolian cultural traditions (Müller-Karpe V. 2001) as well as the Old Assyrian trading networks. For most of the LBA, however, the mountainous Black Sea coast and inland regions seem to have been inhabited by socially less complex and coherently organised groups of mobile peoples, whose archaeological traces are as yet difficult to fathom (Yakar and Dinçol 1974; Yakar 1980; Glatz and Matthews 2005).

3.2.2.1. Region B1

The region between the Kızılırmak and the Black Sea coast (Region B1) appears from the textual sources to have been invaded and subsequently occupied by the so-called Kaska peoples sometime during the Middle Hittite Period (Klinger 2002; Schuler 1965 adheres to an earlier date) (Table 3). In this process, territories formerly an integral part of the Hittite core region, including important cult centres, were apparently destroyed and pillaged. Hittite-Kaska relations maintained a primarily hostile undertone throughout the remainder of the LBA, although indirect textual evidence hints at possibilities of relatively peaceful cohabitation (Schuler 1965, 145-148), which would be expected of border zones (Lattimore 1962, 469-470; Lightfoot and Martinez 1995). Hittite great kings adopted a whole array of cultic, military and diplomatic strategies from prayers to frontier garrisons, resettlement programmes and peace agreements to curb the Kaska threat and impose a measure of control (Schuler 1965). Ultimately, however, standard strategies of imperial control appear to have failed over the essentially acephalous and fluid socio-political organisation of the Kaska, despite reports of a temporary political centralisation among them (Annals of Mursili II, Goetze 1933, 88-9). Though probably not the ultimate cause of Hittite imperial collapse, it is highly likely that Kaska groups had a share in the gradual decline of the polity and the abandonment of the capital city at the end of the LBA (Glatz and Matthews 2005).

3.2.2.2. Region B2

The Pontic mountains and highland plains and valleys of north-eastern Anatolia beyond the Yeşilırmak and the Kelkit Çay were the realm of another tribal federation, made up of the Azzi and Hayasa, which threatened the Upper Land and other areas under Hittite sway (Table 4). Although texts refer to "the early days of Hatti" as the first instance of hostilities on the part of the Azzi in a decree of Hattusili III (Goetze 1940), the first chronologically tangible indication of contact is a treaty with a Hayasa leader by Tudhaliya II(III) at the end of the Middle Hittite Period, albeit in the form of a later copy. What followed were two further treaties and a dynastic marriage. That did not, however, prevent repeated hostilities in the first part of the Empire Period (Klengel 1999, 188), after which the sources on the Azzi-Hayasa dry up.

3.2.3. Region C

Region C lies to the west of the Hittite core region and covers the transitional topographic zone between the central Anatolian plateau and the Aegean coastal plains. Unlike Region B, and similar to areas immediately to the east of the central plateau (Region G1), this large area received comparatively little detailed attention in Hittite sources and its historical geography is accordingly afloat. Potential, but not generally agreed upon, candidates for a location in Region C1 include Arawanna, Kalasma, Kassiya and Pitassa; and part of the Arzawa and Lukka Lands for Region C2 (Garstang and Gurney 1959, Map 1; Forlanini and Marazzi 1986, TAV. XVI; Hawkins 1998, fig. 11; Bryce 1998, Map 3; Klengel 1999, Karte 5).

Only a small number of Hittite sources mentions any of these polities and only very limited information about relationships with the Hittite empire are supplied. Textual mentions of the time of Mursili II and Muwatalli II list Arawanna, Kalasma and Pitassa as tribute bearing polities. They detail instances of desertion from Hittite rule and

repeated attacks either on Hittite territory or on polities under its sway. An interesting glimpse of the socio-political complexity of Kalasma and its relationship with the Hittite empire can be gained from a lengthy episode in the Annals of Mursili II (year 21, Goetze 1933). Normally ruled by a council of elders (del Monte and Tischler 1978, 164), Mursili had made a certain Aparru the lord/governor of Kalasma. Aparru, however, broke his oath and unified Kalasma and reigned in it "like a king". Over several seasons, Mursili and his officer fought against Aparru, who had begun to attack Hittite territory. "Outside the gates" of the town Lakku, Aparru fell in battle and the Hittite army sacked and burned the settlement, leading deportees back to Hattusa. The possibility of re-conquest and integration into Hittite ruled territory was seized by the governor of Pala and Tumana (Region B1) during a subsequent civil-war in Kalasma.

If the above geographical correlations are broadly correct, it appears that various parts of Region C fluctuated in and out of relatively shallow Hittite rule at least from the beginning of the Hittite Empire Period. Conversely, Hittite effective control or its threat seems to have been immediate enough to extract tribute in the form of troops from several of these regions. Arawanna, Kalasma and Pitassa are listed by Egyptian sources as part of the Hittite alliance at Qadesh (Klengel 1999, 216). Soldiers from Arawanna were also stationed at Nerik in the central Kaska zone (del Monte and Tischler 1978, 30). Local socio-political organisation, on the basis of the Aparru episode, may be interpreted as less complex than that of the Hittite core region and only temporarily centralised, although the Annals of Mursili II report fortified settlements in the region.

3.2.4. Region D

Region D defines the general area of the Aegean coastal region from the north-west (Region D1) to the west and south (Region D2). Region D3 encompasses the more mountainous southern part of western Anatolia. While the details of LBA historical

geography are still hotly debated, particularly the question of Troy-Wilusa (Easton, Hawkins, Sherratt and Sherratt 2002; Hertel and Kolb 2003), the broad geo-political arrangements proposed, almost simultaneously, by Starke (1997) and Hawkins (1998, fig. 11) appear to have found relatively broad acceptance (e.g. Niemeier 1999, 142; Bryce 2006, 83-84; Forlanini and Marazzi 1986, TAV. XVI or Klengel 1999, 137 Karte 5 for a different versions). Following this outline, Region D1 includes the political coalition of Assuwa and Wilusa, while the Arzawa Lands, Arzawa, Mira-Kuwaliya and Seha River Land, are here summarised as Region D2. Classical Lycia and the western part of Pamphylia, which have tended to become equated with the Lukka Lands of Hittite texts, are here referred as Region D3.

The political entity of Ahhiyawa or its representatives played an important role in the power-political configurations of LBA western Anatolia. Geographically, Ahhiyawa has been variously equated with the LBA cultures of the Aegean Islands or Crete, the Mycenaean mainland and north-west Anatolia (see Niemeier 1998, 20 Fig. 3). No attempts are made in this study to further investigate this issue, but Hittite relationships with the western polities of Asia Minor were, at times, closely intertwined with this area's interaction with representatives and allies of Ahhiyawa.

3.2.4.1. Region D1

A small number of texts, including the Annals of Tudhaliya I(II) and Arnuwanda I mention the political entity of Assuwa (Table 5) in the approximate area of Region D1 (Bryce 1998, 136). The reason for mentioning it here is the fact that Wilusiya/Wilusa is referred to as one of several countries in the Assuwa federation defeated apparently by Tudhaliya I(II) (Garstang and Gurney 1959, 121-122). In later documents Wilusa (Table 6) forms part of the Arzawa Lands. The relationship with the Hittite empire appears to have developed from military attacks and rebellions to gradually more peaceful ties,

until a treaty with Muwatalli II indicates Wilusa's vassal status, its obligation to supply troops and inform on developments in the region.

3.2.4.2. Region D2

The first historical references to Hittite-Arzawan relations (Table 7) date to the Old Hittite Period, although contacts may have occurred already at the time of Labarna I (Heinhold-Krahmer 1977, 12-14; Klengel 1999, 38). The annals of Hattusili I mention a campaign against Arzawa from which Hattusili brought back cattle and sheep and a rebellion of Arzawa and subsequent campaign by king Ammuna are also recorded by an Old Hittite source (Heinhold-Krahmer 1977, 20-21, 27). In addition, Luwiya, as one geographical entity under Hittite sway in the law code, was replaced in a later version with the toponym Arzawa (Hoffner 1997).

Texts of the following Middle Hittite Period convey the same impression of repeated Hittite gain and loss of influence or control in western Anatolia through military campaigns and various scenarios of intrigue and local rebellion. The re-dated Annals of Tudhaliya I(II) and Arnuwanda I, for instance, list a number of west Anatolian polities, which Tudhaliya I(II) is said to have conquered and from where he brought back deportees to Hattusa. A bronze sword with a hieroglyphic inscription commemorating the victory over Assuwa, found at Boğazköy-Hattusa, has been suggested to belong in this period (Klengel 1999, 111). Possibly also dating to this phase is a document referring to a certain Madduwatta, his connections with Ahhiyawa and his apparent success in destabilising Hittite influence in Region D as well as mount regional support for attacks on the Hittite heartland (Klengel 1999, 121-122; Bryce 2006, 111 prefers a date in the late imperial phase). An exchange of letters (EA 31 and EA 32, Moran 1992) between Tarhuntardu, the king of Arzawa, and Pharaoh Amenophis III over the dynastic marriage with an Arzawan princess attests to west Anatolian political strength

at the end of Middle Hittite phase. A passage in EA 31 reports that the Land of Hatti had been broken.

Under Suppiluliuma I, however, this situation apparently changed rapidly as he fought in a series of west Anatolian campaigns to curb Arzawan attempts to occupy the outer stretches of Hittite core territories in Region A3. Text fragments also mention building projects in some of these border towns and a victorious Suppiluliuma appears to have been able to secure an agreement/oath with the leader of Arzawa. Suppiluliuma also tried to bind a local leader through dynastic marriage and oath to Hattusa but the tactic of vassal-overlord relation failed (Heinhold-Krahmer 1977, 70-72). In the following generation, Mursili II, in several campaigns, conquered most of western Anatolia and in an attempt to divide and rule, he split the Arzawa alliance and turned its constituent parts into the vassal polities of Arzawa Minor, Mira-Kuwaliya (Table 8), and the Seha River Land (Table 9).

3.2.4.3. Region D3

The Lukka Lands of LBA texts have become relatively firmly associated with classical Lycia in south-west Anatolia. Textual mentions as well as archaeological work in the region are exceedingly scarce and the former present the usual picture of shallow control and military interludes. The first mention of the Lukka Lands dates to the early imperial phase, where Mursili II bemoans a number of rebellious polities west of the core region. While Lukka is referred to as a possible destination of a military campaign in the Alaksandu Treaty between Wilusa and Muwatalli II, Egyptian sources list the region as part of the Hittite alliance at Qadesh (Klengel 1999, 213-216). A text fragment seemingly suggests the return of hostilities during the reign of Hattusili III (Heinhold-Krahmer 1977, 246) and the Yalburt inscription of Tudhaliya IV also mentions a victory over the Lukka Lands, as does the *Südburg* inscription of Suppiluliuma II (Hawkins 1995).

3.2.5. Region E

Region E covers the area of classical Rough Cilicia. During the later part of the Hittite empire, this region briefly became the seat of the Hittite capital and state apparatus and was henceforth referred to as the political entity of Tarhuntassa (Table 11) (Forlanini and Marazzi 1986, TAV. XVI; Hawkins 1995, 50-56; Bryce 1992, 122-123; Dinçol et al. 2000). After the return of the capital to the central plateau, the strategically located polity was governed in a quasi autonomous manner by a branch of the Hittite ruling family.

The city of Tarhuntassa is first mentioned by Hattusili III in his apology as the destination of Muwatalli's II transfer of the capital from the central plateau in the first quarter of the 13th century BC (Garstang and Gurney 1959, 65; Otten 1981; Bryce 1998, 252). The wider political entity Tarhuntassa also appears to have been a creation of this time (Garstang and Gurney 1959, 65). It incorporated, probably as part of its northern frontier, the Hulaya River Land (Hawkins 1995, 50), which may have stretched as far north as the Çarşamba river (Garstang and Gurney 1959, 63-74; Gurney 1992, 221). Hittite political relations with Tarhuntassa were mostly peacefully conducted between members of the same extended royal family, even if dynastic feuds and the usurpation of the throne by Hattusili III introduced a problematic aspect to this relationship. The textual record on Tarhuntassa concerns mostly decrees and treaties (*Bronzetafel,* Otten 1988), detailing its status as a powerful appendage or viceregal kingdom from Hattusili III onwards. The polity enjoyed numerous tax and other exemptions (Garstang and Gurney 1959, 66-68; van den Hout 1995; Bryce 1998, 298). Despite its semi-autonomous political status, however, it appears to have partaken, at least at the highest socio-political level, in the Hittite state cult (*Bronzetafel* cf. Klengel 1999, 283 note 595).

It has been suggested that Kurunta of Tarhuntassa, despite all the favors from Hattusa, may have attempted the usurpation of the Hittite throne. This is mainly based on a seal impression from the Hittite capital reading "Kurunta, Great King, Labarna, My Sun" (Bryce 1998, 354; Klengel 1999, 296). A recently discovered rock relief at Hatip on the Konya plain further points towards the, at least symbolic, claim of the king of Tarhuntassa over Hittite territory (Dinçol 1998; see Chapter 6). Another hieroglyphic inscription on the *Südburg* at Boğazköy-Hattusa, details a number of victories in western Anatolia by Suppiluliuma II, in which he also claims to have conquered Tarhuntassa and made sacrifices in the city (Hawkins 1995, Klengel 1999, 301-302). The apparent continuation of a local dynasty at Tarhuntassa beyond that of Hattusa, is suggested by hieroglyphic inscriptions on the Kızıl and Karadağ, in the north-eastern border-zone between the two political entities. In these, a certain Hartapus claims great-kinship and a filial relation to a Mursili (possibly the exiled Urhi-Tesub/Mursili III, Klengel 1999, 315-316).

3.2.6. Region F

Region F denotes the wider area of Cilicia proper and its hinterland along the Seyhan and Ceyhan rivers. During most of the LBA this region was unified under the kingdom of Kizzuwatna (Goetze 1940), which, at the height of its power during the Middle Hittite Period appears to have stretched up onto the central Anatolian plateau and into eastern Turkey.

The relationship of Kizzuwatna with the Hittite polity (Table 12), at least from the perspective of the latter's sources, underwent a gradual but not linear development from hostility to increasing Hittite control and pacification. Aggressions between the two states escalated during the Middle Hittite Period with the backing, and under the overlordship of, Mitanni. Hittite kings, as well as conducting military operations and sporadic outreaches southwards, drew up treaties with successive kings of Kizzuwatna

whose parity in status was reinterpreted for the advantage of Hatti after it had regained its strength. During the Hittite imperial phase, textual sources paint the picture of a rather close integration of Kizzuwatna within the extended central region of the Hittite empire.

The first Hittite mention of Kizzuwatna as a political entity dates to the Old Hittite Period. In it, king Telipinu describes a revolt and its subsequent crushing of the city of Adaniya at the time of king Ammuna and a similar clash with Lawazzantiya during his own reign (CTH 19 Vs. II §24; Hoffmann 1984). Telipinu also drew up a first parity treaty with Isputahsu of Kizzuwatna, whose seal impression was found at Tarsus (Gelb 1956, 246-247 Nr. 1; Chapter 6). Three further agreements followed during the Middle Hittite Period (Freu 2001, 15; Beckman 1996, 12-13).

Kizzuwatna defected, as far as the treaty between Sunassura and king Tudhaliya I(II) (Klengel 1999,106; Jasink 2001, 53) reports, from its alliance with Hatti and entered the sphere of Hurrian political hegemony. This effectively cut off one of the most important communication routes between the Anatolian plateau and northern Syria. Tudhaliya, however, brought Kizzuwanta back into the Hittite realm and it was later incorporated as a protectorate (Goetze 1940, 37-9; Bryce 1998, 52; Klengel 1999, 112). At an unknown point in time, possibly still during the reign of Tudhaliya I(II), Kizzuwatna was annexed and placed under direct Hittite rule (Beal 1986, 439-40; Freu 2001, 22-3).

As a Hittite province, Kizzuwatna managed to uphold its religious supremacy represented by the important cult centres of Kummani and Lawazzantiya (Jasink 2001, 55), which Suppiluliuma I sought to wield with the appointment of his son Telipinu as high priest of Tesub, Hepat and Sarrumma in Kizzuwatna (Klengel 1999, 166-7). Further ties between the two regions were forged by dynastic marriages, most prominently between Hattusili III and Puduhepa of Lawazzantiya (Klengel 1999, 110).

3.2.7. Region G

3.2.7.1. Region G1

Region G1 encompasses a rather ill defined and archaeologically little explored zone between the Kızılırmak and the Euphrates. Among the candidates for this region are Tipya and Istitina somewhere close to the Hittite Upper Land (Region A2), Tegarama and Kummaha further to the south and east (e.g. Klengel 1999, Karte 5). From the very limited textual evidence and the floating historical geography for this transitory region, we gain a picture of a patchwork of small polities of varying social complexity and inclination towards the Hittite empire in the context of a relatively volatile climate that could easily cut off communication routes with the Euphrates region.

The city and country of Tipiya are mentioned in the Annals of Mursili II (Goetze 1933, 27, 31) as the base of a Kaska leader for assaults on the Upper Land. Tipiya and Istitina were attacked by Mursili II's army and, thus, represented enemy territory. Tegarama is the earliest polity referred to in Hittite sources as a station on the campaigns of Mursili I (Klengel 1999, 66). The Edict of Telipinu (Hoffmann 1984, 21) also talks about Tegarama in connection with Hantili. In the later phase, Tegarama functioned as an important transit point on the way to Carchemish for Hittite troops to rest and regroup. It was also under threat from the tribes of Region B and polities located to the south-east (G2) (Klengel 1999, 184). The land of Kummaha on the Upper Euphrates is referred to in Middle Hittite sources as belonging to the Hittite sphere of influence. It is reported to have been attacked by a Mitanni backed Isuwa and other polities in Region G2 (Klengel 1999, 124).

3.2.7.2. Region G2

The two most prominent political entities either side of the Euphrates in Region G2 are Melid/Maladiya (Malatya Province) and Isuwa (Elâzığ Province) (Table 13). Isuwa, which is textually better attested, underwent a transformation from Mitannian ally and

aggressor of Hittite territories during the Middle Hittite Period to Hittite vassal kingdom in the second part of the LBA. Its territory is thought to have bordered on the Arsania river (Murad Su) in the north and the Euphrates in the south and south-west (Klengel 1968, 63). Isuwa's southerly border may have stretched as far as the Upper Mesopotamian plain and probably included the copper ore deposits of Ergani (Klengel 1968, 63).

Early Hittite excursions to Syria appear to have bypassed Isuwa and Melid/Maladiya, for no reference is made to them by Old Hittite texts (Klengel 1968, 63-4). Alternatively, they may not have existed as political entities at this stage. During the Middle Hittite Period both Melid/Maladiya and Isuwa took an, at times, actively aggressive anti-Hittite stance and provided a place of refuge for populations deflecting from Hittite controlled regions (Klengel 1968, 69; Bryce 1986, 94). With the conquest of Mitanni by Suppiluliuma I, Isuwa, which was formerly governed by a council of elders, was annexed and made a vassal. Correspondence between Tudhaliya IV and the king of Isuwa indicates friendly political and religious relations (Klengel 1976, 74, 87). In addition, bullae with impressions of NCA-style seal types bearing the name of at least one Isuwan king were found at Korucutepe (Güterbock 1973; see Chapter 6). There is also a text of a Hittite high official from the reign of Tudhaliya IV reporting on inspections in the Malatya region and in other locations along the Euphrates. The kingdom of Isuwa, and with it Hittite hold on this area, seemingly came to an end during Tudhaliya's reign due to increasing Assyrian presence in this area (Klengel 1968, 73; 1999, 295)

3.2.8. Region H

Region H defines a rather narrow stretch of land along the Euphrates to the south of G2 and north of the territory of Carchemish. A possible candidate for this region is the country of Armatana (Del Monte and Tischler 1978, 38-39; Forlanini and Marazzi 1986,

TAV. XIV; Klengel 1999, Karte 5). In a decree, Hattusili III mentions hostilities by Armatana towards Hittite territories preceding Suppiluliuma I's reign (Klengel 1999, 130), while the deeds of Suppiluliuma point at the territorial enlargement of Armatana as an ally of Mitanni, reportedly occupying the city of Kizzuwatna (Kummani) (Klengel 1999, 155, 157).

3.2.9. Region I

Region I encompasses areas to the east of the Turkish Euphrates, an assumed border zone between the Hittite and the Mitannian and later Assyrian realms. One of the LBA polities probably located between the Murat Su and the Upper Tigris branches is Alse/Alzi (Del Monte and Tischler 1978, 10; Klengel 1999, Karte 5). The historical preamble to the vassal treaty of Sattiwaza of Mitanni with Suppiluliuma I mentions the campaign of the latter and his victories over Isuwa, Armatana and the crossing of the river in an eastward direction into Alse. Alse's fortress, Kutmar and also Suda were sacked before the Hittite troops arrived at the Mitannian capital Wassukanni (Klengel 1999, 157). Assyrian inscriptions mention military campaigns of Tukulti-Ninurta, a contemporary of Tudhaliya IV, against the king of Alzu/I (Klengel 1999, 295). A letter from Ugarit (RS 34.165, Lackenbacher 1991) reports an Assyrian victory against Hittite troops in Nihiriya, east of the Euphrates in Upper Mesopotamia.

3.2.10. Region J

Region J encompasses territories in southern Turkey and northern Syria under Hittite domination during the LBA. Region J1 defines the southern Hatay and the north Syrian littoral, which in the LBA was occupied by the city-states or petty kingdoms of Mukish, Ugarit, Siyannu and Amurru (Table 14). Region J2 includes the transitional area between the Orontes and Euphrates rivers from Halab-Aleppo to Niya, Nuhasse, Tunip, Qatna and Qadesh (Table 15), while Region J3 denotes the Euphrates region and the LBA kingdom of Astata (Table 16).

The majority of societies in Region J were literate and complexly organised, internally as well as in their local, small scale political entanglements, and a wealth of textual information is available on their relationship with the Hittite empire. Hittite interest in the region began at the time of state formation, when Hattusili I and Mursili I led their campaigns to Syria and northern Mesopotamia. The mode of interaction, however, was military not imperial and beyond destruction horizons and plundered cities these episodes in the 16th century BC should not have left significant traces (e.g. Gurney 1979; Klengel 1999, 38-67). Only in the 14th century do the textual sources point towards an intensified political dependency of the Levant. In the aftermath of Suppiluliuma I's Syrian campaigns and the defeat of Mitanni, vassal treaties were concluded with Syrian states, dynastic marriages forged and a Hittite viceroy and chief priest installed at Carchemish and Aleppo respectively (Bryce 1998, 1989-204; Klengel 1999, 155-167).

3.2.11. Region K

Region K comprises the island of Cyprus. For most scholars, the identification of the island with the Alasiya of the textual sources is relatively firm (e.g. van den Hout 1994, 138; Del Monte and Tischler 1978, 6). Depending on the dating of the Madduwatta text, Hittite political overlordship over Alasiya either began in the Middle Hittite Period or started with the conquest of the island by Tudhaliya IV. A clay tablet carrying the text of two monumental inscriptions, one of a statue of Tudhaliya IV and a hieroglyphic Luwian inscription of Suppiluliuma II describes how Tudhaliya IV conquered Alasiya, deported its royal family to Hattusa and levied tribute from it. It also details a sea and land battle of Suppiluliuma II against the "the enemies from Alasiya" and how he himself enslaved the country, took its royal family into exile and extracted tribute (Güterbock 1967). A fragmented letter appears to contain a reminder on the part of the Hittite chancellery of the goods that are still outstanding from Alasiya (Knapp 1980). Besides being a major source of copper, imports from Alasiya included gold, linen and the *gajjatu*-drug;

Alasiya was also the Hittite equivalent of Siberia, to where *personae non gratae* were sent into exile (Del Monte and Tischler 1978, 6; van den Hout 1994).

Significant direct archaeological evidence for contact between the Hittite central region and Cyprus is restricted to a voracious appetite of the Hittite capital for libation arms and spindle bottles made of the Red Lustrous Wheel-made Ware (Seeher 2001a, 352-353) and a lower distribution density at most excavated LBA sites on the plateau (Eriksson 1993, 31; Kozal 2003, 66). The site of Kilise Tepe in the Göksu Valley has also yielded significant quantities of this pottery both in fine and coarse variants (Knappett 2000; in press; Symington 2001, 169). The origins of Red Lustrous Wheel-made Ware have been sought across the eastern Mediterranean, although a relatively broad consensus has developed with Cyprus as its production centre (Eriksson 1993). Knappett (2000; in print), on the basis of petrographic examinations of the Kilise Tepe and Boğazköy-Hattusa material, also identified either north Cyprus or southern Anatolia as possible locations of production. Material evidence of interaction between LBA Anatolia and Cyprus is restricted to a small number of stray finds from figurines to seals (Mora 1987, 118: 3.2., 143: 3.12.; Kozal 2002) and low quantities of Cypriot ceramic imports other than Red Lustrous Wheel-made Ware (Kozal 2003, 69).

3.3. The Political and Socio-Economic Organisation of the Central Region

Of all the areas reviewed above, archaeological research within Anatolia has concentrated most intensively on Regions A1 and A2. Although fraught with considerable difficulties, archaeological and textual evidence from the Hittite core region permits the most comprehensive glimpse of the political and socio-economic organisation of any LBA Anatolian polity. In the following section different types of information from a variety of records will be combined to gain the fullest possible picture of the workings of the Hittite central region. The aim of this discussion is the distillation from textual sources of information of archaeological significance that can be

combined with material evidence from well known sites in an interpretive model for the archaeological phenomena encountered in the following chapters, particularly that of the survey record (Chapter 5).

3.3.1. Political Organisation and Administration

3.3.1.1. Documentary Sources

The geo-political components of the Hittite heartland and of surrounding regions underwent several transformations over the course of the LBA due to fluctuating territorial boundaries, short-lived political formations and the shifting interests of Hittite textual sources. In the Old Hittite Period, administrative distinctions were explicitly made between the Lands of Hatti, Pala and Luwiya (Beckman 1995a, 540). During the 14th and 13th centuries BC, textual sources suggest a broad four-fold division of the Hittite realm into the central heartland, surrounding buffer zones under more or less direct Hittite control, politically controlled vassal states at some distance, and among these the viceregal seats governed by members of the royal family (Bryce 1998, 46-54).

Hittite documents on relevant subjects include the Palace Chronicle (Güterbock 1938), the Edict of Telipinu (Hoffmann 1984), land grants (Riemschneider 1958) and cadastral texts (Souček 1959), the Hittite law code (Hoffner 1997) and instruction texts (Schuler 1957) as well as various festival and cult descriptions. These texts, however, focus mostly on the earlier and middle part of Hittite history, introducing the possibility that administrative structures and practices may have gone out of use or were replaced by others during the imperial phase.

From these sources we may assume a three-tier administrative hierarchy, acting at the levels of individual communities, regions and the central administrative system (Siegelová 2001, 195), which converged in the person of the Hittite great king. These

were integrated spatially in a network rather than a linear or pyramidal fashion due to Hittite systems of dispersed state, communal and private land tenure. The government of the larger geographical units of the "Lands" and the provinces of the core region were the prerogatives of the sons of the great king or close members of the royal family (Siegelová 2001, 194; Beckman 1995a, 540). A number of state institutions operated on intermediate spatial levels of regions, provinces and districts. Decision-making and administration of the internal affairs of individual communities appear to have been mostly in the hands of councils of elders or "men of the town" (Klengel 1965).

3.3.1.1.1. Level 1: Regional Administration

The upper end of the regional administrative scale was occupied by "palaces" (É.GAL), which existed in settlements outside the capital (e.g. Archi 1973; Paroussis 1985, 62; Siegelová 2001; Imparati 2002, 94-95). These provincial palaces served as royal residences for the king during religious or military assignments, but functioned mainly as regional administrative centres, whose duties included the distribution of royal land and the supervision of its satisfactory operation (Souček 1959; Paroussis 1985), the collection of taxes in the form of goods and labour as well as the organisation of armaments and the redirection of tax income to the central power (Siegelová 2001, 196).

The correspondence of state officials from the town of Maşat-Tapikka seems to suggest the existence of such a palace at Ortaköy-Sapinuwa (Alp 1991, 37). A similar relationship of higher and lower level regional administration has been suggested by Siegelová (2001, 197) for the cult centre at Kuşaklı-Sarissa and the palace at Sulupas(s)i. As Table 17 summarises, regional palaces are attested in the capitals of "Lands" in the Old Hittite Period, in cult centres as well as in towns which housed other administrative institutions such as the AGRIG and his storehouse(s). During the Empire Period, new sites appear to have taken up these administrative roles (Siegelová 2001).

The only palace location that may be arguably identified with an excavated site is Ortaköy-Sapinuwa (Süel 2002).

3.3.1.1.2. Level 2: Local Administration

A network of military, administrative and economic institutions operated on a smaller than regional scale. One of these positions was held by the so-called BEL MADGALTI, "lord of the watchtowers" (Beal 1992, 426-436). BEL MADGALTIs were typically stationed in areas affected by unrest and conflict and fulfilled a number of military as well as civic functions, which are detailed in instruction texts (Schuler 1957). The correspondence between the BEL MADGALTIs of Tapikka, which can be relatively securely identified with the excavated site of Maşat Höyük near Zile, with Boğazköy-Hattusa and the local royal residence at Ortaköy-Sapinuwa gives a vivid picture of the daily praxis of defending the Hittite-Kaska (Region A and B1) border alongside the overseeing of agricultural production (Alp 1991). From these texts, it would appear that the BEL MADGALTI held sway over a considerable territory. Of the 90 toponyms mentioned in the Maşat letters, 37 were identified by Alp (1991, 6-8) as belonging to the administrative sphere of Tapikka. Beckman (1995a, 540), thus, suggested that the office of the BEL MADGALTI could be translated as "provincial governor". The title of provincial governor, however, may be misleading in this context as governors (GAL MEŠEDI, "Chief of the Borderguard") of larger political entities such as Pala are mentioned, for instance, in the Annals of Mursili II (Goetze 1933, 152-155). Conversely, the BEL MADGALTI of Tapikka held sway over not an imperial province in the wider sense but an administrative unit somewhere in between province and district.

The ^{LÚ}AGRIG or "steward"/"overseer", carried out his duties at another, albeit overlapping, intermediate geographical level, possibly the equivalent of a district (Hittite *telipuri*) (Singer 1984, 118). ^{LÚ}AGRIGs were stationed in provincial towns and were responsible for the collection of agricultural produce and its forwarding to the capital,

the supply of food to cultic festivals as well as the redistribution of goods and labour on a local level. Other types of storehouses not under the sway of AGRIGs served as granaries, fodder, wine-cellars and arsenals as well as for the storage of textiles and jewellery.

The approximate locations of mentioned toponyms indicate that the storehouse network, concerned with the extrapolation and storage of local produce, covered the Land of Hatti as well as the Upper and Lower Lands from the Old Hittite Period onwards. The scope of this system does not appear to have been widened with the expansion of the empire (Singer 1984,123-26) and no AGRIG towns appear to have been located in either Kizzuwatna or Isuwa. A seal-house in Kizzuwatna containing iron products is mentioned in a letter to the Assyrian king from either Hattusili III or his predecessor (Klengel 1999, 245). Areas which frequently fluctuated in and out of Hittite effective control such as the north-western provinces of Pala and Tumana are also not included in the storehouse lists (Singer 1984,123-26).

Temples and other cult institutions such as the "stone houses" (mauseolea of members of the royal family) also owned considerable land-holdings and were involved in the exploitation of the rural economy as well as its administration (Imparati 1977; Klengel 1975; van den Hout 2002, 80-91). The best-excavated examples of typical Hittite temple architecture outside the capital are Building C on the acropolis and Temple 1 on the northern terrace at Kuşaklı-Sarissa (Müller-Karpe 2003, 388-389). A possible candidate for a Hittite "stone-house" or mausoleum is the site of Gâvur Kalesi south-west of Boğazköy-Hattusa (Naumann 1955, 408-9; Imparati 1977; Lumsden 1995, 2002; van den Hout 2002, 89-91; Kühne 2001). The so-called cult inventory texts (most recently Hazenbos 2003) detail the re-organisation and standardisation of the Hittite state cult in the political core territories, as well as possibly an extended area to the west and south, during the reigns of Hattusili III and Tudhaliya IV. This afforded

particularly Tudhaliya IV not only a gain in ideological capital but also a firmer, direct administrative grip on regional power-bases throughout the affected area (Pecchioli Daddi 2006, 125).

The relationship between the different state institutions involved in the administration of the Hittite core region is as yet rather unclear (Beckman 1995a, 540), but the evidence strongly suggests at least some degree of spatial and functional overlap of different provincial officials' functions. The town of Tapikka, for instance, is mentioned in the texts as accommodating a BEL MADGALTI as well as being an AGRIG town. Similarly, AGRIGs and other store-house institutions were present in towns with local palaces (Table 17) (Siegelová 2001). Other uncertainties pertain to the relationships between the spatial sub-units such as districts (*telipuri*) and '"lands" (KUR - in a more restricted sense) (Singer 1984, 118; note 131), which formed the physical context for the various dignitaries' scope of control. With the exception of the Maşat texts (Alp 1991), there is an almost complete lack of information in the textual sources on how many settlements contained an average Hittite district, and how many districts in turn were included in a province or land.

3.3.1.1.3. Level 3: Communities

The internal affairs of individual communities, including the towns which housed state officials, who formed the bridge between local production and transfer into the central distribution systems as well as the military protection afforded by the state to its inhabitants, appear to have been largely left in the hands of traditional local assemblies (Klengel 1965; Beckman 1995a).

3.3.1.2. Archaeological Evidence

The textual evidence concerning the administration of the Hittite core region provides only a general outline of geographical administrative units and the official posts in charge of their government. The only possible way to extract additional information

from this meagre record is to combine it with existing archaeological information, which involves the correlation of administrative institutions and their settlement contexts with excavated sites.

Del Monte and Tischler (1978; del Monte 1992) have compiled the references in Hittite texts of ca. 2000 toponyms (Mielke forthcoming), including countries, regions, cities and smaller settlements, alongside rivers and mountains. The matching of these with geographical and topographical entities and with archaeological sites has been the long-term concern of the study of Hittite political geography (Garstang and Gurney 1959; Gurney 1992; Hawkins 1998), whose details are far from being resolved. Besides the undisputed match between the Hittite capital, Hattusa, and the impressive archaeological remains at Boğazköy in central Turkey, the most secure identifications of Hittite towns with archaeological sites come from northern Syria, where documentary evidence from various sources allows the firm correlations of cities such as Carchemish, Ugarit and Emar on the ground.

In central Anatolia, the identification of Hittite settlements with archaeological remains is most promising in the case of a handful of sites which have yielded LBA textual evidence of their own. In turn, these also tend to be the most extensively excavated sites and thus allow us to most accurately match economic and administrative functions, as described in the texts, with the archaeological record. Besides Boğazköy-Hattusa, Alaca Höyük, İnandık Tepe, Maşat Höyük, Ortaköy, Kuşaklı (Sivas) and the Cilician mound of Gözlu Kule-Tarsus, the, as yet unexcavated, sites of Kuşaklı (Yozgat) and Kayalıpınar (Sivas) have produced LBA documentary evidence. Of these, Maşat Höyük, Ortaköy and Kuşaklı (Sivas) can be most securely identified with settlements mentioned in the texts (Table 18).

The general characteristics of these administrative centres such as size, presence of fortifications and large-scale architecture can serve as blueprints for the identification of sites with potentially similar administrative functions in the survey record of LBA Anatolia (Chapter 5), while other features such as landscape monuments may be more fruitfully analysed (Chapter 6) against this background. The identification of the physical attributes of NCA central places is of particular significance, as Hittite texts are mostly silent about the actual as well as relative dimensions of geographical units in general and settlements in particular. The determinative URU (Hittite *happira-*) is used in Hittite texts for the identification of human settlements regardless of their scale "... from the world-city Babylon down to a simple nomadic encampment" (Beckman 1999, 167; also Dinçol 1996, 118).

3.3.1.2.1. Ortaköy-Sapinuwa

A flat LBA site near the village of Ortaköy, situated in a tributary valley of the Çekerek to the east of Boğazköy-Hattusa, has been identified as Hittite Sapinuwa by Ünal (1998). Written evidence from Ortaköy-Sapinuwa and from Maşat-Tapikka, point towards the presence of a regional palace and associated administrative and economic functions at the site (Siegelová 2001).

The excavated portions of Ortaköy-Sapinuwa indicate state-related functions from large-scale storage to archival activities in two monumental structures (Süel 2002). More than 3000 cuneiform tablets, mostly related to the Hittite state cult, were found in the debris of the upper storey of Building A (Figure 4). A magazine of large storage jars was excavated in Building B (Figure 5). Ortaköy-Sapinuwa presents a planned and newly founded settlement of the LBA, with no previous occupation. The Middle Hittite – early Empire Period date of the site rests mainly on the historical context, and palaeographical criteria of the texts.

Limited publications and uncertainties about the actual dimensions of the site impede an effective comparison with other LBA sites, both excavated and detected through surveys. In 2002, one of the excavators suggested a settlement area of 900 ha (Süel 2002, 156), which would outsize the imperial capital, Boğazköy-Hattusa (180 ha) more than five times (also Mielke forthcoming). An alternative, and for various reasons more probable, estimate of 8.5 ha has appeared in the *American Journal of Archaeology* (Gates 1996, 297-298).

3.3.1.2.2. Maşat Höyük

The site of Maşat Höyük lies 116 km south-east of the Hittite capital and ca. 45 km from Ortaköy-Sapinuwa. It was identified as the Hittite provincial centre of Tapikka by Alp (1991; 1979). Tapikka was the seat of a BEL MADGALTI as well as an AGRIG and was the source and recipient of numerous letters to and from the central authority concerning the control of a contested frontier zone and the administration of its Hittite side (Alp 1991, 42-43; 1979; Siegelová 2001; contra Yakar 1980).

Maşat Höyük is located in the centre of a fertile plain, surrounded by low mountains as well as springs and several rivers. The published dimensions of the site are 450 x 225 m (Özgüç 1978, 51), or ca. 7.9 ha. Ökse (2000a), based on Plan 3 of the excavation report (Özgüç 1978), however, has recently estimated the settlement area of Maşat Höyük to be around 15-16 ha. The reasons for this discrepancy are not entirely evident.

Five building levels dating to the MBA and LBA were identified at Maşat Höyük, the most impressive of which, Level III, yielded the remains of a large monumental structure (73 x 62 m, Özgüç 2002b, 169) in characteristically NCA architectural style and building techniques (Özgüç 1978, 52) (Figure 6). The building features a large central court and altogether 45 rooms were excavated, which served various production, large-scale storage and archival-administrative functions. Cuneiform tablets

from the archive are dated on the basis of palaeographic characteristics to the Middle Hittite Period and two seal-impressions of Tudhaliya II(III) serve as terminus *post quem* for the destruction of Level III (Alp 1991, 109). Both the citadel and the lower slopes of Level III appear to have been surrounded by a retaining wall (Özgüç 1982, 151).

The subsequent Level II partially revealed the remains of another monumental building, albeit not quite as impressive as the preceding edifice as well as documents in the Middle Hittite ductus. A bulla with the seal of Suppiluliuma I dates this level to the transitional Middle Hittite - early Empire Period phase (Özgüç 1982, 80-81; 1978, 64-65). The following Empire Period settlement features less substantial architecture, cuneiform texts as well as fragments of rare ceramic imports from the Aegean and Cyprus (Özgüç 1982, 77; 1978, 66; 2002b, 169).

3.3.1.2.3. Kuşaklı-Sarissa

Archaeological investigations at Kuşaklı since 1992 have brought to light the substantial remains of a planned LBA city with clear archaeological and textual evidence of its importance in the network of Hittite control over this region (Figure 7). The identification of the archaeological remains with the Hittite city of Sarissa is based on text finds from the site containing the description of the spring festival. A cult centre of this name is also attested in texts from Boğazköy-Hattusa and appears to have been particularly renowned for the importance of its weather-god (Wilhelm 1995). Seal-impressions bearing the personal name Sariyasa have also been recovered at Kuşaklı (Müller-Karpe 1995, 22-25).

Traditional excavation and geophysical prospecting methods allow a very detailed reconstruction of the urban layout of Kuşaklı-Sarissa. Surrounded by a 1.5 km long fortification wall with four major gateways (e.g. Schachner 1998, 1999), whose axis aligned the major monumental buildings of the town, Kuşaklı-Sarissa was dominated

by a substantial structure on the acropolis. Building C was built and destroyed during the first part of the LBA (Müller-Karpe 2003). Different functional areas such as a brewery, an archive, sacred areas and various storerooms have been excavated. A further monumental building, identified as a temple on the basis of architectural similarities with counterparts at Boğazköy-Hattusa and its material culture inventory was excavated on the north terrace. Further to the west, thin-walled structures point towards a habitation area, with evidence for craft activities (Mielke 1998). Additional features are a possible reservoir near the north-east gate as well as a silo complex and pottery production facilities on the southern tip of the settlement (Mielke 2001). On the outside, a series of depressions flanking the outline of the fortification wall were identified as dams (Hüser 2004). Beyond the dams and to the north-west of the fortified city, an outer town has been identified (Müller-Karpe 2002a, 177). In the slopes above the settlement to the south-east, a so-called *Huwasi* sanctuary associated with a well-pond was excavated.

As Ortaköy-Sapinuwa, Kuşaklı-Sarissa is a new foundation of the LBA; no earlier occupation levels have been encountered (Müller-Karpe 2003, 386-387). Similar to Maşat-Tapikka, the most dominant monumental structure, Building C, was destroyed and fell subsequently out of use sometime during the Middle Hittite Period (15th century BC).

Kuşaklı-Sarissa is not among the towns of the AGRIG or store-house cities (see Singer 1984; Hoffmann, 1984, 41-45; see Table 17). A cache of bullae from a basement room in Temple 1 yielded several pieces that had been impressed with the seal, fashioned in the style of Old and Middle Hittite glyptic (Müller-Karpe 1995, 16-17), of a certain *Malizitima*, who bore the title of "king". Müller-Karpe (1995, 16-17; 2002a, 187) has suggested that *Malizitima* and a *Sariyasa* may have been local rulers residing at Kuşaklı.

Although there is little textual material to illuminate conclusively the rank of Sarissa in political/administrative terms, the local textual evidence and documents from the Hittite capital leave no doubt about the important cultic status of the sacred places at Sarissa and in its surrounding. As state institutions, Hittite temples were fundamentally linked to the central political apparatus (Imparati 1982) and although the temples appear to have been situated primarily on the receiving end of tax revenues and *corvée* services, they also performed important roles in the political administration and economic organisation of their surrounding hinterland (Klengel 1975). As the host of the spring-festival, in which the king himself took place (Wilhelm 1995, 38-39), Sarissa must have been furthermore linked to the administrative sphere of the AGRIG towns, which are known to have supplied products to important festivals across the central region (Singer 1984).

The archaeological evidence too confirms the site's identity as a major regional player. Its fundamental connection with the central power at Boğazköy-Hattusa is illustrated by the fact that Kuşaklı is a planned installation of the Old/Middle Hittite Period and both architecture and artefactual material find exact parallels at the capital (e.g. Müller-Karpe 2003; Müller-Karpe V. 1996, 1998 and 2006). In terms of dimensions, the citadel of Kuşaklı measures more than double the size of Maşat Höyük and with 18.2 ha (intra-mural) it ranges among the largest settlements in the realm of the Hittite empire (Table 19).

Archaeological survey conducted by Ökse in the Sivas province since the early 1990s has located three additional settlements with LBA surface material that at least in terms of size range above Kuşaklı-Sarissa (Ökse 2001a). Located at distances between ca. 15 and 50 km from each other, the sites of Kalankaya (24 ha), Kayalıpınar (20 ha intramural) and Kuşaklı-Sarissa (18.2 ha) have been envisaged as centres of local territories in the eastern Upper Land by Ökse (2001a; 2000a) (Map 6). The site of

Aşağı Kalaca measures 26 ha and may represent another such centre. Ökse (2001a, 502) suggests that two further size ranges of small towns (between 7 and 10 ha) and villages (between 1 and 2 ha) were scattered between the largest sites (18-26 ha).

The site of Kayalıpınar has been repeatedly the subject of archaeological surveys where 2nd millennium BC ceramic material was collected (Yakar and Gürsan-Salzmann 1979, Fig. 1: nr. 52; Ökse 1994). In 1999, the site was revisited by the Kuşaklı excavation team. The pottery collected during this latest visit dates to the MBA to LBA I; no explicitly later forms were detected (Müller-Karpe 2000, 357). Most importantly, a fragment of a Middle Hittite cuneiform tablet, a ritual text concerned with the festival of the goddess Istar, which involved the presence of the great-king, was also found. The Istar cult, the site's location close to a navigable stretch of the Kızılırmak, its physical size as well as relative geographical vicinity to Kuşaklı-Sarissa, prompted Müller-Karpe to put forward a tentative identification of the site with Hittite Samuha, the capital of the Upper Land (Müller-Karpe 2000, 364).

3.3.1.3. The Dimensions of Hittite Administrative Centres

Several material characteristics of Hittite administrative centres may be established on the basis of the above discussion. In terms of natural settings, all three sites are located in dominant positions in relatively open valleys or on small plains of arable land, on or near rivers or other good sources of water. Maşat-Tapikka in particular is located in an area of great agricultural potential, the Zile – Tokat plains. One of the sites is flat, while the other two are located on natural elevations. Each site has substantial monumental architecture, although only Kuşaklı-Sarissa has yielded a fortification wall. Conversely, all of the four larger LBA settlements recorded in the Sivas province by Ökse (2000a) show traces of fortifications. While the monumental Level III at Maşat Höyük is built atop a less significant MBA settlement, Ortaköy-Sapinuwa and Kuşaklı-Sarissa are new foundations built on virgin soil, which appears

to be a defining feature of LBA settlement developments (most recently Schachner 2006, 154; Mielke forthcoming).

Concerning the most readily available information from survey evidence, approximate site-size, the following picture tentatively emerges. From the original excavation report, Maşat-Tapikka would appear as the smallest settlement with an approximate surface area of 8 ha (Özgüç 1978, 51), although Ökse (2000a, 107) suggested a size around 15 or 16 ha. The latter size-estimate would bring Maşat-Tapikka closer in line with Kuşaklı-Sarissa (18,2 ha) and three other LBA settlements recorded during the Sivas Survey (Ökse 1994-2002). The published site dimensions of Ortaköy-Sapinuwa by Süel (2002, 157) are difficult to evaluate since no detailed maps or plans of either survey results or geometric prospection have been published, which would underscore this claim to a truly vast city in LBA terms. Ortaköy-Sapinuwa aside, comparisons with other LBA settlements in dominant political positions in Anatolia and northern Syria further indicate that with the exception of the capital itself, site-sizes between 16 and 25 ha are to be expected of centres on the upper end of regional hierarchies (Table 19).

3.3.2. Economic Organisation

The outlines of Hittite economic organisation are conveyed to us, often in an indirect manner, by a very limited number of texts. The available documents all derive from palatial sources and are chiefly concerned with the state controlled, political component of the economy; aspects of a domestic sector are only touched upon in circumstances where they intersect with that of the state (Klengel 1986, 24). The most relevant texts on this topic are essentially the same which have already illuminated aspects of Hittite political organisation in the previous section. Archaeological work in this direction includes archaeobotanical and zooarchaeological research on LBA subsistence behaviour at specific sites (e.g. Pasternak 1998; Driesch and Pöllath 2003) and general environmental conditions (Dörfler, Neef and Pasternak 2000).

From the textual sources it seems evident that the economic base of the Hittite core region and most of its constituent territories was mixed farming and animal husbandry (Beckman 1995a, 538; Bryce 2002, 73). Hittite laws in particular recall the rural nature of LBA central Anatolian society and pay detailed attention to its regulation and smooth conduct. The texts are concerned in particular with questions of land-ownership, its (re-)distribution – at private level or through state intervention - as well as the supervision of the successful exploitation of the land and the due rendering of part of its produce to state institutions (Imparati 1982, 225). Social and, in the case of the state, political power was based in the first instance on the ownership of land and livestock (Hoffner 1995, 565).

There have been few attempts to take the analysis of Hittite socio-economic organisation beyond such general statements; these, however, have to be appreciated in the context of disciplinary history and national traditions. Hittite economic studies flourished between the 1960s and early 1980s and the most prominent model presents a Marxist perspective on the "Asiatic Mode of Production". Due to the lack of more recent theoretical approaches to the subject, Diakonoff's (1967) dual model of Hittite, and generally ancient Near Eastern, land-ownership, economic production and power is still largely unchallenged and forms the departure point of more recent discussions of Hittite economy (e.g. Paroussis 1985; Bryce 2002; also Beckman 1995a) and its Syrian dependencies (e.g. Heltzer 1976, 1982, 1996; Liverani 1987; Schloen 2001 for an alterative, Weberian model). Due to the scarcity of available information on the Hittite economy, the Formalist-Substantivist debate on the nature of ancient Near Eastern economies has principally bypassed LBA Anatolia and there seems little need to involve it now.

In *Die hethitische Gesellschaft*, Diakonoff (1967, 314-317) suggested, on the basis of textual evidence, an urban-rural dichotomy, expressed through state versus communal

land-ownership. In a more recent treatment, Paroussis (1985, 64) too juxtaposed state-owned and communal/private land in the Hittite law code and other textual sources. From these we gain a sense of a strongly state controlled redistributive economy. The palatial source of the textual record, however, should be kept in mind together with the interest of an urban, imperial elite aiming to ideologically transcend land-owning, rural, aristocracy and other social groups that could have challenged central rule through their ties with the countryside (e.g. Eisenstadt 1963; Yoffee 2005, 61, 197).

3.3.2.1. The Political Economy

The documentary sources indicate that state-held land was not geographically concentrated but was scattered throughout the core region and possibly also in newly acquired territories (Paroussis 1985, 65). A small number of cadastral texts (Souček 1959), for instance, show that the land belonging to a local palace was distributed within the boundaries of several settlements, where also existed communally owned parcels. It is, however, impossible to determine the ratio(s) between royal and communal/private land within the boundaries of average LBA central Anatolian settlements (Paroussis 1985, 64 note 34). Also not clear are the historical circumstances of this pattern of dispersed ownership. However, strategic advantages, as well as perhaps a greater administrative effort, may be assumed from such an arrangement and continuous palatial presence throughout its territories. Dispersed land-holdings (*Streubesitz* - Klengel 1986, 26) are also a defining characteristic of large-scale private property in what may have been a deliberate royal strategy to avoid the rise of alternative, territorially based, powers (Bryce 2002, 75).

State land was attributed and exploited by different types of institutions and individuals in various forms and used by the state to pursue various economic and political strategies (Figure 8). In the first instance, royal land was exploited directly by the palace or its local subsidiaries for its own needs. The king, the queen and close

members of the royal family all had personal landed properties (Diakonoff 1967, 318). Royal land-holdings could be donated to temples and other religious institutions, such as "stone houses" (Diakonoff 1967, 318) as well as to distinguished individuals, usually in state service and of high social rank (Riemschneider 1958). Land-donations of this kind were gifts and generally included settlements and their associated labour force. Important settlements, cult institutions or individuals on whom such royal donations were bestowed, were occasionally exempted from tax and labour obligations (Beckman 1995a).

Land under the control of a palace or a temple, both of which were essentially part of the same state-system (Beckman 1995a, 540; Imparati 1982), could be attributed or leased to individuals of various social status, including free and dependent members of local communities as well as deportees ($NAM.RA^{MEŠ}$) under different service arrangements. Lessees and attached farmers were required to work the crown land and to supply part of their produce to the relevant state institutions. In addition to attached village farmers and lessees, royal estates were also worked through a system of corvée obligations levied from all free persons working communal or private land and in addition to part of their taxed produce (Bryce 2002, 76).

Tentative archaeological evidence for agricultural taxation during the imperial period comes from cereal deposits from two monumental structures at Kuşaklı-Sarissa (Pasternak 1998). According to Pasternak (1998, 163-164), the diversity and general poor quality of cereals - small grain size and frequent admixture of weeds - routinely recovered from Temple 1 and Building C in Schicht 2 are indicative of regularised taxation payments (*Abgabewirtschaft*). The argument is that fields, whose produce is intended for taxation payments are less well tended than others. That small grain size and weeds in the Kuşaklı-Sarissa finds are not the result of ignorance or inadequate agricultural techniques is indicated by a contemporary mass find of high quality emmer

in Building C, which is thought to represent temple provisions. Such behaviour may, thus, be read as a possible form of rural resistance to state control (Scott 1990).

Agricultural overproduction to provide supply for state institutions but also for the wider population is a well known aspect of state and empire level societies and is attested in various forms in the Hittite documentary record. In recent years, large-scale LBA silo constructions have been excavated at several sites on the central plateau (Özgüç 1988, 74; Seeher 2000; Omura 2001c, 11-27, 2002b, 6-19; Mielke 2001, forthcoming). The approximate figures (Table 20) calculated by Mielke (2001, 241) for the number of persons that could be fed per year by these provisions and the estimated agricultural space required to produce the storable quantities, shed some light on the demographic realities of LBA central Anatolia, especially when logistical transport limits for these resources are taken into account (Mann 1986, 10; 137-140; Lattimore 1962, 477-79). Error margins for the calculations in terms of soil quality and crop yield would have to be taken into account as well as the fact that the LBA central Anatolian diet, although based on cereal consumption, was also richly supplemented by a variety of agricultural and wild products (Hoffner 1974).

3.3.2.2. The Communal Sector

Communal as well as private land was held either by village communities or individuals/households within these and could be freely bought and sold. The prices for the alienation of communal or private land, with different functions (field, pasture, forest, vineyard) and in various conditions (arable, barren) are detailed in the Hittite law code alongside prices for everything needed to run a farm including livestock, equipment and wages for hiring additional personnel (Hoffner 1997, Table 2).

Free settlements, that is villages located outside crown-land, were internally structured as a *Gemeinde,* a community, according to Diakonoff (1967, 351-353). Diakonoff

further sees this concept of communality expressed in a certain degree of autonomy from the state structure in internal economic (e.g. the distribution of land) and juridical matters. Externally, these communities were represented by the so-called "Men of the Town/Village" (^{LÚ}MAŠKIM.URU) and/or a council of elders (LÚ^{MEŠ} ŠÚ.GI or Hittite *mijahwantes)* (Klengel 1965). Hittite border chiefs (BEL MADGALTI), for instance, were instructed to consult the council of elders and the community representatives in juridical matters where communal law rather than the law code was to be employed (Diakonoff 1967, 352-353).

Community members were called "people of the town/village" (LÚ^{MEŠ} URU^{LIM}) and in addition, lessees of royal land or attached labourers were also part of the settlement structure (Diakonoff 1967, 353); all of which were organised in households (É). Households were patriarchically arranged and constituted an extended or individual family, with possible additions of free or slave labourers (ca. ten persons altogether) (Klengel 1986, 24-30; Diakonoff 1967, 353-356). The state economy too relied on the household as the principal unit of production, although their houses or households may have been artificially constructed from the pool of deportee populations (Klengel 1986, 29).

3.3.2.3. The Distribution and Use of Land

As mentioned earlier, geographical dispersion of land-ownership is a defining feature of Hittite economic organisation. The landed property of a household, setting aside social differences, included field, garden, vineyard, fruit-garden, meadow, pasture and woodlands. A household's property was held within the confines of each village (Klengel 1986, 25; Archi 1973, 17), although different types of land could be owned within several settlements' boundaries. This is illustrated by the example of Tiwatapara, who was given an "economic unit" (*Wirtschaftseinheit* – a farm?), one IKU meadow as cattle pasture near the village/town of Parkalla and a three-and-a-half IKU vineyard

with apple and apricot trees near the settlement of Hanzusra (KBo V 7, Vs. 28-33 cf. Riemschneider 1958, 353; Bryce 2002, 75).

Detailed textual information about actual dimensions of fields and total land-holdings of institutions as well as individuals are rare and difficult to interpret. Even though the so-called cadastral texts (Souček 1959) provide detailed descriptions of field-sizes and their location with respect to natural and cultural landscape features, their use for a reconstruction of Hittite economic strategies of land-use and the distribution of settlement boundaries, both of which are elements of human-landscape interaction potentially accessible through survey data, is fraught in several ways. One of the problems concerns Hittite metrology and its reliable translation into modern values. Using a speculative equation of the Hittite *gipessar* with the Babylonian cubit, a minimum field-size of 600 m² and a maximum of 23,200 m² have been calculated by Klengel (1986, 26). Alternatively, Paroussis (1985, 40-41) has proposed a minimum field size of 200 m² and a maximum of 11,600 m² for the parcels listed in the cadastral texts. These fields, however, are only components of larger royal and private land-holdings. From the available textual sources we cannot therefore determine the average dimensions of either large estates or the land owned by individual farmers. Even if the listed fields would have constituted the entire possessions of a land-owner or an individual farmer, the landed properties mentioned are distributed within the domains of several villages/towns and, therefore, do not add up to a total of land associated with a single settlement.

An important hint about the size of land associated with LBA settlements on the central plateau comes from § IV (late version of § 6, Hoffner 1997, 20; Bryce 2001, 81 note 20) of the Hittite law code, which seems to indicate that a settlement's legal responsibilities extended up to three DANNAs from the village centre (cf. Bryce 2002,81; note 20 my emphasis):

> If a man is found killed on another person's property, if he is a free man, (the property owner) shall give his property, house, and 60 shekels of silver. But if (the dead person) is a woman, (the property owner) shall give (no property, but) 120 shekels of silver. *But if (the place where the dead body was found) is not (private property), but uncultivated open country, they shall measure 3 DANNA's in all directions, and whatever town/village is determined (to lie within that radius), he shall take those very (inhabitants of the town/village).* If there is no town/village, (the heir of the deceased) shall forfeit (his claim).

The DANNA is a measure of length, whose metric value depends on the interpretation of the *gipessar*, which Otten (1939) equated with the AMMATU or ell (~ 50 cm). Melchert (1980) later suggested that 30 AMMATU or *gipessar* make up one IKU, one hundred of which in turn make up one DANNA. According to this line of argument, one DANNA amounts to ca. 1500 m (cf. van den Hout 1990, 518; 521) and the three DANNA's mentioned in §IV/§6 in the Hittite law code are the equivalent of approximately 4.5 km.

1 DANNA = 100 IKU = 3000 *gipessar* = ca. 1500 m (?)

The radius of ca. 4.5 km legal responsibility around a settlement during at least the Empire Period is very likely equivalent to its approximate territorial boundary, within which each settlement's land-holdings were comprised. Outside this radius, there appears to be a cessation of legal responsibility, which may be associated with the conceptual opposition of the settled and the un-settled realm in Hittite social geography as suggested by the written sources.

According to Beckman (1999, 165) the concept of the Hittite countryside stretched from just outside settled areas to the mountainous wilderness, which frames most central Anatolian habitats. Settlements are designated with the logogram URU or the Hittite word *happira-*, whose original meaning was "place of trade" (Beckman 1999, 161 note 5). Other, far less common, logograms either indicate a fortified town/city (URU BÀD) or a ruined or evacuated town/city (URU.DU_6) (Dinçol 1996, 119). Semantically opposed to the settlement is the "*gimra-/gimmara-*" (Lebrun 1989 cf. Beckman 1999,

161-162). In close association with the settled realm, Hittite *gimra-/gimmara-* as well as the logogram A.ŠÀ, may refer to agricultural land, but the same terms also assume the meanings of "steppe" or "wilderness" further away from settlements. Travellers were robbed or killed as well as potentially polluting rituals and military encounters took place in the more distant, uninhabited *gimra-/gimmara* (Beckman 1999, 162). Equivalent to the distant *gimra-/gimmara* is the logogram HUR.SAG which designates mountainous areas associated with wood and pasture land or, for the purpose of rituals, virgin spots, "where the plough does not go" (CTH 393 cf. Beckman 1999, 164). Thus, while the distant countryside is dangerous as well as ritually significant, Beckman (1999, 165) compares the closer countryside with Oppenheim's "corona" of principally irrigated fields and gardens, which, according to the textual record, framed typical Mesopotamian cities (Oppenheim 1969, 6).

The radius of three Hittite DANNA of legal responsibility may conceivably represent the "corona" of Hittite settlements. If indeed three DANNA can be equated with a radius of 4.5 km, an astonishing overlap has to be constituted between Hittite culture-specific notions of the adequate space due to a settlement, legally, conceptually and surely functionally, and cross-culturally observed average maximum sizes of hinterland habitually exploited by sedentary communities, since

> [b]eyond about 1 kilometre, the costs of movement become sufficiently great to warrant some kind of response; at a distance of 3-4 kilometres the costs of cultivation necessitate a *radical* modification of the system of cultivation or settlement – for example by the establishment of subsidiary settlements...
> (Chisholm 1968, 131 – original emphasis)

The 4.5 km juridical and, very likely, subsistence radius around LBA villages/towns, at least on the central plateau, would further suggest a minimum distance of ca. 10 km between average agricultural settlements. Ökse's (2001a, 2000a) preliminary reconstructions of the LBA settlement system in the western part of Sivas province, supports the assumption of a minimum distance of ca. 10 km between settlements.

More common, at least in this part of the Hittite Upper Land, are distances of 15 to 20 km and around 50 km between higher-order sites.

Archaeological evidence in the form of so-called linear hollow-ways, which characteristically fan out from mound sites in northern Iraq and Syria have been interpreted as long-term communication routes both between settlements and between settled and agricultural zones, depending on whether they connect two sites or fade without reaching another site (Wilkinson 2003, 111-120; Wilkinson and Tucker 1995, 24-28). If they do not connect settlements, hollow-ways generally radiate between 3 and 5 km out from central mounds before fading out. The proposed function of these features as access routes to fields and their fading points at distances which have been cross-culturally observed as cut off points for economic agricultural strategies (e.g. Chisholm 1968; Vita-Finzi and Higgs 1970) have led to their interpretation as demarcating the approximate area of intensive cultivation around Bronze Age settlements in the region (Wilkinson 2003, 116-117).

3.3.2.4. Internal Organisation of LBA Anatolian Settlements

Another important issue to be considered in this respect is the internal organisation of LBA settlements. The question of whether Anatolian villages and small towns were internally nucleated or whether individual houses were more likely to be located near their fields is an important one, as the two types of settlement strategies translate differentially into the material record and are archaeologically recognisable with varying success depending on field methodology.

MBA and LBA Anatolian landscapes are characteristically dominated by mound sites, which often have Chalcolithic and Early Bronze Age origins and which are the remnants of internally tightly nucleated communities, with buildings constructed in close proximity to each other and over extended periods of time. A growing tendency towards

"mountain cities", most prominently represented by the capital Boğazköy-Hattusa, has been identified by past commentators during the LBA (Bittel 1976, 105; Masson 1995; Schirmer 2002, 205; Schachner 2006, 154; Mielke forthcoming for a critical assessment). Mounds, however, continue to be prominent, while excavated sites indicate a settlement policy away from traditional, MBA, central places. In either case, fortification or perimeter walls clearly define the extent of the settlement and agricultural activities would have been carried out in the surrounding fields. This settlement strategy implies a rather empty hinterland in terms of permanent human occupation between clearly defined sites, with the possible exception of seasonal shelters for harvest or pasture (most recently Steadman 2005, 288-289; Wilkinson 2003, 108). Archaeologically, multi-period mounds are comparatively easily recognisable even with extensive survey methods. In contrast, small-scale single period occupations are considerably less likely to be detected by the extensive methods deployed by most Anatolian survey projects, and represent a probable source of bias in the record presented and analysed in Chapter 5. Equally difficult to detect archaeologically is the alternative settlement strategy of internal dispersal, where individual farmsteads lie scattered throughout a village's or town's territory in the midst of their fields.

The factors that influence human settlement strategies, of which internal dispersion and nucleation are the polar expressions on a continuum of possibilities, are diverse and complexly intertwined. Defining variables are the physical environment, the technological and economic possibilities for its exploitation, social and demographic trends as well as the broader historical circumstances (Demangeon 1962 cf. Roberts 1996, 29). Physical conditions in the form of terrain, soil-quality, climate, species present and access to water are important factors in settlement strategies as they may or may not permit nucleation and the associated necessary access to sufficient resources to sustain a clustered settlement. Technological innovations and economic trends may further alter the potential of the territory and influence settlement strategies.

Conversely, social traditions and strategies too can be expected to strongly influence settlement choices:

> If dispersion enshrines an idea of individuality, then nucleations derive from a blending of factors to which the term *communality* may be applied...nucleation is undoubtedly linked to the idea of collectivity.
>
> (Roberts 1996, 35 - original emphasis)

This concept of commonality or collectivity, according to Roberts (1996, 35-37), involves kinship ties ("*communality of assent*"), communally organised field-systems ("*communality to economise*") and potential external coercion ("*communality of enforcement or coercion*"), which may have been partially responsible for the nucleation of villages in medieval Europe.

The textual record of LBA Anatolia does seemingly point towards a nucleation of households/farms in village and town communities (Bryce 2002, 81). The concept of communality and shared responsibility in economic, administrative and legal matters in the Hittite core region is emphasised in the written sources in the form of communal land-ownership and distribution of agricultural resources as well as legal responsibilities of the village/town located closest to a crime-scene as in §IV/§6 of the Hittite law code (Hoffner 1997, 20). The dispersed character of landed property within the boundaries of different villages or towns (Klengel, 1986, 26), whether crown, communal or private, in addition to the apparent ease with which fields changed hands appears to make a dispersed internal make up of LBA communities rather unlikely.

Moreover, textual and archaeological data from across Western Asia point towards internal nucleation as the preferred mode of settlement during the Bronze Age (e.g. Wilkinson 2003, 107-127). Yorgun Tepe, ancient Nuzi, in northern Iraq has yielded a large corpus of texts concerned with the sale of landed property, contemporary with the Old and Middle Hittite phase (15^{th} to 14^{th} centuries BC). Information about neighbourhood relationships of different settlement components such as houses and

fields, which are provided by the Nuzi texts, have been used by Zaccagnini (1979) to reconstruct the internal organisation of ancient Nuzi settlements. An internal separation of habitation and agricultural area is postulated by Zaccagnini (1979, 26-28; 74-77; 82-93) on the basis of topographic details mentioned in the texts, which indicate that fields generally bordered other fields, roads and canals, while houses were located in close proximity to other houses, often inside city walls; areas of specialised cultivations in the form of gardens and orchards occupied the space in-between. Two different types of communication routes channelled movement between the cultivated areas and the settlement on the one hand and between urban areas on the other (Zaccagnini 1979, 55). Geographically closer to the Hittite heartland, the textual evidence from the palace archives of Alalakh VII provides some insights into the nature of settlement in the Amuq plain during the early second millennium BC. Ownership transfer of entire settlements with their territories intact and the sale of individual houses within these have been interpreted as indications for a nucleated settlement pattern in the hinterland of Tell Atchana-Alalakh (Magness-Gardiner 1994, 40). Conversely, Liverani (1982, 251) tentatively proposed a network of state-related farming estates in the vicinity of the capital city and traditional village communities in the more distant parts of the countryside in the neighbouring kingdom of Ugarit.

Hittite cadastral texts suggest a similar picture of nucleated settlement in LBA central Anatolia. As in the Mesopotamian case, field locations are indicated by mentions of nearby permanent features. In the case of the Hittite examples, fields are mentioned as located alongside rivers, canals and ponds as well as on routes/paths to other towns/villages or the borders between settlement territories (Table 21). There is no indication in the Hittite texts that fields habitually lay *within* settlements or between houses.

The majority of traditional Turkish settlements are also internally nucleated (*geschlossenes Haufendorf*) (71,4%), with only a comparatively small percentage of internally dispersed villages (14,3%) (Kündig-Steiner 1974, 457). Prior to the industrialisation and population explosion, which began in the early 20th century AD, only easily usable land such as flat coastal areas, valley floors and high-plateaus were permanently settled; less accessible mountainous zones would have been used as pastures by sedentary farmers living in the valleys. Nomadism also played a complementary role in the exploitation of the agriculturally marginal zones (Kündig-Steiner 1974, 457) and still does today.

The microtoponomy in the Hittite cadastral texts and the law code too reveals a complex countryside,

> *...où il existe un noyau certainement irrigué, les champs <près de la rivière>, <près du canal> et une <prairie>, noyau autour duquel s'étendent des champs en culture pluviale, <champs de la montagne>, <champs du rocher>* (Paroussis 1985, 35 referring to Planhol 1963).

Orchards of fruit trees, vineyards and, further away, pasture lands of different quality (Klengel 1986, 27) as well as forest terrain were included in individuals' and institutional land-holdings. Thus, in most parts of the Hittite core region and its outer provinces few uniform 5 km catchment circles of good, arable land can be expected to have been available to LBA sites.

3.3.2.5. Demographic Trends in LBA Anatolia

Demographic trends are a difficult subject for historians and archaeologist alike (e.g. Postgate 1994b), yet the numbers and densities of people living in a particular settlement, a region and eventually the empire as a whole, are among the most important variables for the course of imperial development. Labour-shortage was an ever-pressing problem in the Hittite empire, which Hittite great kings sought to keep at bay through the influx of apparently large numbers of deportee populations from

conquered territories (Hoffner 2002; Alp 1950-1). Great kings Suppiluliuma I, Mursili II and Hattusili III, for instance, claim to have deported several thousand captives to the imperial core region (Table 22). These so-called NAM.RA^{MEŠ} were subsequently deployed as agricultural labourers as well as workers assigned to palaces and temples.

From the textual record it is evident that different regions of the empire experienced differential demographic trajectories. For instance, documentary evidence points to the depopulation of large stretches of land between the Kızılırmak and the Pontic Mountains and the northern and eastern fringes of the Upper Land due to recurring Kaska raids during the Middle Hittite phase. The same area saw repeated Hittite attempts of repopulation during the imperial period (Klengel 1999; Schuler 1965). Judging from the relatively high numbers of captives deported to Hattusa and their re-distribution across the core region, these areas should have experienced a comparative increase in population densities, although warfare, plague epidemics (e.g. Mursili II's Plague Prayers and Prayer to Arinna) as well as droughts and famine (e.g. Telipinu Edict, Hoffmann 1984; Royal correspondence with Ugarit RS 20.212 and RS 20.141B Nougayrol 1968) during the imperial phase must have considerably reduced the local populations. Warfare and the deportation of people can also be expected to have reduced demographic densities in the peripheral regions of the Hittite empire to the west and east of the central plateau.

Few concrete attempts have been made to estimate the population of individual Hittite settlements or of any of the constituent parts of the Hittite polity. On the central plateau, only the Hittite capital itself has been subject to repeated speculations about how many people may have lived within its defensive walls. The first proposal by Spengler of around 10,000 inhabitants during the imperial phase was refuted by Bittel, who revised the number to ca. 15-20,000 people through analogy with the crammed conditions of settlement in modern Anatolian mountain villages/towns (Bittel and Naumann 1952,

26). Mora's (1977) archaeological and textual investigation of the habitation space excavated within the city walls of Boğazköy-Hattusa confirmed Bittel's estimate of around 15 to 20,000 persons for the maximum extent of the city during the imperial phase, which is still a generally accepted (or never revised?) assumption (e.g. Czichon 2000, 271). According to the calculations of Mielke (2001), around 30,000 people could have been fed for a year by the grain stored in the three major excavated silo complexes across the capital. Bryce (2002, 250) rightly points out that population numbers will have certainly fluctuated over time and new archaeological discoveries of domestic character such as the recently excavated house structures in the valley of Sarıkale in the western Upper City, which date to the early imperial phases (Seeher 2003, 7-14), further add potential living space to the intra-mural settlement.

Boğazköy-Hattusa, thus, presents itself as a relatively empty city. The majority of the ca. 180 ha of intra-mural space of the Hittite capital are dedicated to large, monumental structures spaced at generous distances from each other with few and relatively small parcels of organically grown domestic quarters scattered in-between. The only other city under Hittite control during the LBA for which population estimates have been attempted is the trading *entrepôt* of Ras Shamra-Ugarit (e.g. Heltzer 1976; Garr 1987). Most recently, Garr (1987, 40) suggested a population of around 7,600 persons for the 20 to 25 ha site. The vast majority of LBA settlements encountered in the archaeological survey record, however, falls within the categories of small towns and villages, for which no excavated sites can be drawn upon as comparisons. Only generalised population estimates along the lines of Adams (1981) are, therefore, possible for the survey evidence discussed in Chapter 5.

3.3.2.6. Urbanism and Settlement Trends

Urbanism and settlement trends on the central Anatolian plateau and in surrounding regions during the 2nd millennium BC have so far received very limited scholarly

attention (Bartl, 1997; Yakar 2000; Mielke forthcoming). The few studies which did concern themselves with these issues draw their conclusions often from the available textual record. It is part of the aim of this research (Chapter 5) to establish to what extent the archaeological data contradict, correct or confirm these conclusions. The compilation of all geographical names mentioned in the cuneiform texts from Boğazköy-Hattusa by del Monte and Tischler (1978; del Monte 1992) was instrumental in the formation of a corpus of philological data, which allowed propositions about the developments of Anatolian urbanism and settlement trajectories to be made. However, no systematic and synthetic studies of the corpus have to my knowledge been conducted. In a very general statement and referring to the del Monte and Tischler *Répertoire géographique*, Klengel observed that an increase of population is reflected in the Hittite documents:

> ...besides, a great many central places, there existed hundreds of villages or separately located farms during the 2nd millennium B.C..
> (Klengel 1986, 24)

In a more differentiated analysis, Archi (1976-1977, 99-101; 1980a) observes that Hattusa ascends to be the sole large urban centre during the imperial phase at the expense of earlier MBA centres, 31 of which are mentioned as palatial seats in the Old Assyrian merchant texts. The earlier centres either lose importance or disappear entirely from the textual record. Thus, a discontinuity in settlement, at least in major centres, can be observed between the MBA and LBA in the textual record. Numerous cities mentioned in LBA texts indicate a flourishing urbanism in the Hittite state and empire (Archi 1976-1977, 101); and indeed, "... the system of cities was constitutive of state power" (Beckman 1999, 168). However, this is as far as the textual sources on their own can lead us. Only the analysis of the archaeological evidence can further our understanding of the spatial expressions of Hittite imperialism and the potential regional settlement trajectories associated with its expansion.

With this analysis of archaeological and textual information concerning the political and socio-economic structures of the Hittite core region and their material and spatial expressions, we can now move on to the central part of this thesis, the investigation of archaeological data for the nature and scope of inter-regional relations between this core area and its surrounding territories. The sequence of the following chapters reflects a concern both with a gradual ascent in socio-political levels of interaction and degrees of directness of imperial involvement in regional transformations. It also takes into account the intertwined character of ceramic data and its chronological scope with the results of archaeological field survey.

CHAPTER 4: THE POLITICS OF POTTERY - IMPERIAL AND LOCAL DYNAMICS

This chapter represents an investigation of the excavated ceramic evidence from eight major LBA settlements from different parts of Anatolia. It seeks to readdress questions of formal and technological connections between the ceramic tradition of LBA north-central Anatolia (NCA) and pottery from regions that surround the Hittite core area at varying distances and that participated in different cultural traditions throughout the Bronze Age. This process of uniformisation of distant ceramic assemblages, in terms of both formal characteristics and the apparently increasing plain (or "drab") appearance of this pottery, has figured prominently in recent discussions of LBA and transitional EIA Anatolia (Gates 2001, 2006; Müller-Karpe 2002b, 257; Fischer et al. 2003a; Fischer et al. 2003b, 317; Genz 2005; Müller 2005; Postgate 2005; Gunter 2006; Jean 2006), yet there are no comprehensive studies dedicated to a comparative and inter-regional analysis of this pottery (for typological comparisons see Müller-Karpe 1988 *Vergleichsstücke*; short summaries by Parzinger and Sanz 1992, 91-97; Gunter 2006).

The development of locally manufactured, monochrome pottery of NCA-style in different parts of Anatolia is conventionally thought to reflect, at one level or another, the political circumstances of the time (e.g. Garstang 1953, 141-142; Goldman 1956, 350; Burney 1980, 165; Macqueen 1986, 105; Gunter 1991, 105; 2006, 360-361; Henrickson 2002, 123; Gates 2001, 141; 2006, 308; Symington 2001; Müller-Karpe 2002b, 257; Müller 2005; Postgate 2005; Jean 2006, 328-330 for a critical perspective). Traditional treatments of the subject refer to Hittite campaign reports and vassal treaties to offer a generalised political explanation for NCA-style material culture beyond its original heartland (Garstang 1953, 141-12; Goldman 1956, 350; Jean 2006, 322-323). More recently, interpretations involving specific economic considerations as well as administrative models have been put forward, alongside the interpretations of

new, or re-emerging, ceramic types at the end of the LBA as signs of political disintegration (Gates 2001; Müller 2005; Postgate 2005). Economic explanations focus on the standardised appearance and inferred mass-production of this pottery and connect it to Hittite texts with legal-economic contents. In a very general outline, Müller-Karpe (2002b, 257) has proposed that the creation of a uniform state (*Einheitsstaat*) with a strongly state-dependent economic structure was a major proponent in the overarching uniformity of LBA Anatolian pottery, the standardisation of its repertoire as well as the general simplification of vessel forms. An empire-wide standard of pottery manufacture was proposed by Gates (2001, 141) on the basis of the formal resemblances of shapes across Anatolia and alleged similarities in the published fabric descriptions of LBA II repertoires. Gates (2001) has also argued for pre-firing potmarks and other practices of marking property referred to in the textual sources as an expression of this centralised or centrally supervised mode of economic production. Korbel (1985, 117-120) in a primarily technological analysis of the LBA pottery from Norşuntepe reverted to textually attested imperial settlement policies and movement of deportee populations as an explanation for the increasing similarities of the Norşuntepe material with NCA ceramic types and the general decline in production standards. Most recently, Müller (2005, 112) and Postgate (2005) have favoured explanations that involve Hittite administrative personnel at sites in surrounding regions.

4.1. Research Questions

The conventional treatment of the ceramic evidence from culturally diverse regions and geographical situations on the respective fringes of Asia Minor as a coherent sample that allows collective explanation warrants re-examination in the light of the theoretical issues outlined in Chapters 2 and 3. These concern the general relationship between cultural and political networks and the analytical problems inherent in *a priori* conjectures of congruence between these. They also pertain to the rejection of standard analytical and interpretive practices that grant priority to the socially exclusive

and geographically centralised perspective of the textual sources over archaeological approaches that allow for an active role of the dominated in their imperial relationships. At a technological level, the issue of product standardisation presents itself as a research question and not the starting point for interpretation. In the same way, we have to disentangle the implications of standardised manufacture for the socio-economic organisation of production from preconceived expectations of imperial strategies that are described in or inferred from textual sources. In addition, we ought to keep sight of the archaeologically and ethnographically attested range of possible relationships between craft-specialists and political institutions and how the latter draw political and/or economic advantage out of such arrangements. For these reasons, the following investigation does not perceive of NCA-style pottery in surrounding regions as a marker of political control *per se*. Rather it uses this evidence as the starting point for an empirical investigation of how empire as an organisational principle of socio-political, military and cultural interaction networks impacts on this specific realm of material culture in different regions.

The primary research questions of this chapter concern the degree of homogeneity that regional LBA ceramic assemblages actually display.

- What are the NCA vessel types most commonly found at peripheral sites? Do they comprise types that are diagnostic specifically of the LBA NCA tradition?
- What is the timeframe for the introduction of NCA types at surrounding sites and regions? Are there chronological differences in the adoption of these shapes in different regions?
- What is the proportion of NCA to local or other vessel types at surrounding sites?

- How uniform is the repertoire of NCA types across the sample of surrounding sites? Are there significant regional differences in the up-take of NCA style pottery?

Secondary research questions concern the potential changes, if any, in the social and cultural routines of local societies who either consciously opted for the adoption of NCA-style pottery as part of both an internal and external socio-cultural dialogue or had imposed upon them such new products through imperial ideological, economic and administrative strategies. The differentiation between cultural influence and political control is the ultimate, if only partially achievable, goal of such an investigation. The discussion of these issues in the second part of this chapter raises questions that so far have hardly featured in the general debate about the spread of NCA pottery styles.

- Does the production of NCA-style pottery present a change in local economic organisation?
- What are the functional ranges of pottery types with NCA origins? Did their introduction at surrounding sites lead to new practices in food preparation, consumption or storage?
- Can social differences be discerned in the use of or access to NCA ceramic types at surrounding sites (and where possible in their hinterland)?

4.2. Analytical Methodology

The above research questions will be considered on the basis of published LBA ceramic evidence from settlement contexts at Porsuk, Gordion, Beycesultan, Aphrodisias, Tarsus, Korucutepe, Norşuntepe and Tille Höyük, for the degree of formal and technical similarity displayed in the ceramic assemblages in relation to Boğazköy-Hattusa (Map 7). The standardised typological references developed by Parzinger and Sanz (1992, 15-39) for the Boğazköy-Hattusa material are followed throughout the

analysis. References are also made to the typological divisions by Müller-Karpe (1988) and to Fischer's (1963) catalogue of individual vessels. The two standardised typologies by Müller-Karpe (1988) and Parzinger and Sanz (1992) can be distinguished by their respective tendencies to lump or split (see Adams and Adams 1991: 280-281) a repertoire that is dominated by fluent transitions between formal variants. Each typology has its advantages and disadvantages, but for the purpose of this study, the more detailed subdivisions of Parzinger and Sanz (1992) are used in the classification of assemblages from geographically peripheral sites. Figure 10 provides an overview of this typological scheme.

Functional vessel categories are marked with a capital letter (e.g. A for jars or J for plates). Variations within these are designated by numbers (e.g. A 1. or J 2.2) and sub-variations by lower-case letters (e.g. A1.b or J 2.2.c). This latter category is only rarely employed in this study since finer-grained formal distinctions are often not possible from publication reports. The formal properties of the different vessel types and their sub-variations are described by Müller-Karpe (1988, 24-146) and Parzinger and Sanz (1992, 15-36) and will not be repeated here.

This study draws on the formal similarities proposed between surrounding sites and Boğazköy-Hattusa by Müller-Karpe (1988, 24-146 *Vergleichsstücke*) and Parzinger and Sanz (1992, 91-97) as well as Fischer (1963, 86-92) but does not agree wholly with either. Since these publications, pottery from deep soundings at Gordion and Tille Höyük as well as the final report of LBA finds from Beycesultan have become available, warranting renewed investigation.

The analytical methodology adopted here is necessarily simple due to variable sample sizes and site-specific problems. It involves a qualitative classification of the corpus of vessels and diagnostic sherds according to formal (shape) and technical (temper and

surface treatment) criteria. To overcome at least some of the problems of differential sample sizes and the associated disparities in excavation and recording methods, the relative frequencies of vessel types are calculated out of each individual site's published ceramic record and presented in the discussion below. In this way, significant differences and similarities in the frequencies of formal sub-types can be visualised, taking into account a bias towards complete and fine-ware examples in many of the older publications. Although very different vessel totals are published for the selected sites, most of the publications appear to include at least generally comparable portions of representative functional types.

In order to assess both formal and technological details of each sherd/vessel independent of previous categorisations, only those illustrated in publications were included in the database. The number of excluded items, however, is negligible as they often represent similar or identical profiles to those illustrated. In a second step, prevalent NCA-style vessel types and their likely functions are compared to local or other components of each individual site's shape inventories. Their contextual associations are examined wherever possible in order to assess whether access to or the use of this pottery was monopolised by, for instance, state institutions and ruling elites or whether urban/rural distinctions characterise its proliferation. In the realm of production, questions of formal standardisation and reduction in repertoire diversity are considered in relation to potential transformations in the organisation and social environment of production.

4.2.1. Archaeological Context and Site Formation Issues

The pottery investigated in this study derives from a variety of settlement (as opposed to burial) contexts from eight sites of different size and likely function in regional as well as empire-wide economic and administrative hierarchies. The LBA settlements at all eight sites in question underwent a series of rebuilding stages as part of settlement

renewal in mud brick architectural traditions or after interruptions by destruction and/or abandonment stages. The majority of pottery used in this study is unlikely to have been recovered from its use contexts due to a number of pre- and post-depositional processes such as discard and site-formation (Schiffer 1987; LaMotta and Schiffer 1999). Nevertheless, these assemblages can still be used to assess the stylistic correspondences to the NCA ceramic tradition.

4.2.2. Questions of Contemporaneity

Together with factors such as publication and recording methods it does, however, impede the detailed investigation of my secondary research questions. It also incurs difficulties for the detailed chronological assessment of occupation levels. The question of contemporaneity between the assemblages selected for analysis is important, if not resolvable in an entirely satisfactory manner for reasons related to stratigraphic problems as well as the nature of the NCA ceramic development (Schoop 2006, 218). The assemblages selected for analysis overlap chronologically, but do not all cover the exact same time-spans (Figure 9).

4.2.3. Data Quality Issues

In view of recent statistical approaches to LBA NCA pottery at Boğazköy-Hattusa (Müller-Karpe 1988; Parzinger and Sanz 1992; Schoop 2003a; 2006) and elsewhere (Katsuno 2004; 2006), a quantitative analysis of the pottery from provincial sites would have been desirable. It would have allowed a closer synchronisation of individual settlements with the Boğazköy-Hattusa sequence in addition to the assessment of the relative number of NCA-style ceramics and their overall importance at individual sites. As Table 23 illustrates, data quality issues, however, inhibit such analysis at most LBA Anatolian sites.

Average counts of recovered sherds/vessels per site are in the area of several thousand, while the number of published examples range between two to seven hundred sherds/vessels. With the exception of the pottery reports from Korucutepe (Griffin 1980) and Norşuntepe (Korbel 1985), which employ standardised shape and fabric recording systems and in this way allow the analysis of the entire recovered assemblage, the majority of publications illustrate the qualitative range of ceramic types encountered in each architectural level. It is, therefore, unavoidable that the results of the following analysis reflect to a certain degree differential publication and excavation strategies. The amount of pottery that never actually made it into pottery study rooms for post-excavation analysis at these sites can only be estimated.

In July and August 2004 I was able to conduct a small experiment to examine this question. The following figures show the insufficient detail in publications of 2nd millennium BC Anatolian sites and allow a realistic appreciation of the published data used for this analysis. Under the auspices of the Alişar Regional Project's excavations at Çadır Höyük in Yozgat Province, I was able to work on the pottery from a ca. 50 m^2 step-trench exposure of two early LBA domestic structures. The majority of ceramic finds came from just outside/below the house walls. Relatively large numbers of pots appear to have fallen from these buildings or were deliberately thrown down the slope. All of the ceramic evidence from this excavation area was collected and subsequently weighed, counted, sorted according to fabric and diagnostics were drawn and described.

Although no surprise, the results are still striking and underline the long-held critique of excavation, recording and publication methods, which, until recently, were predominant in Anatolian archaeology. Altogether 109 kg of pottery were recovered from trench 800.920 in ca. four weeks of excavation involving two archaeologists and three experienced local workers. This equals 4,860 sherds of which 376 were diagnostic

pieces. The vast majority of both body and diagnostic sherds were of standard plain 2nd millennium BC fabric. As expected, fine ware pieces were rare. No complete vessels were found and only a typical Old Hittite red slipped jug was partially reconstructable.

4.3. NCA Pottery

The site of Boğazköy-Hattusa forms the central focus for the study and classification of the LBA NCA ceramic tradition, while the results of other sites also begin to appear in final publications (Mielke 2006a). Whether the traditional concentration on the typological and chronological ceramic sequences of the capital city as a yardstick for other LBA settlements on the central plateau and beyond is methodologically justified remains open to debate (Parzinger and Sanz 1992, 1). The identity of Boğazköy-Hattusa as Hittite imperial capital, however, may sufficiently validate the assumption that the city was indeed a major proponent of the NCA ceramic style and other aspects of culture, aside from offering the most complete ceramic sequence to date as well as comparatively extensive publication.

Formal typological classification and the establishment of a relative chronological framework have been at the centre of ceramic studies at Boğazköy-Hattusa and other major sites on the plateau during the last century (Bittel 1932; Bittel 1937a, b; Fischer 1963; Orthmann 1963; Müller-Karpe 1988; Parzinger and Sanz 1992; Neve 1984; Orthmann 1984; Schoop 2003a, b, 2006, forthcoming; Mielke 2006a). In contrast, only few attempts have been made to address socio-economic or cultural aspects of the pottery in question (Müller-Karpe 1988; Schoop 2006).

LBA NCA pottery is rooted directly in the wheel-made monochrome ceramic traditions of major MBA centres such as Kültepe, Alişar Höyük and Boğazköy-Hattusa (Fischer 1963; Neve 1984). The monochrome wheel-made pottery of particularly the *Karum* Ib phase forms the basis and simultaneously represents the peak of the ceramic tradition

that in little altered form characterises pottery on the central plateau throughout the following LBA. Through time, NCA pottery shows the signs of increasing standardisation, a reduction in the formal spectrum of its repertoire as well as a strong degree of formal conservatism.

Although typological developments take place in this time span, the vast majority of vessel shapes are found throughout the entirety or large portions of the MBA and LBA sequence. The evolution of the ceramic types not only appears to have been continuous but also relatively slow. This hampers the identification of "type-fossils" for any of the architectural periods at the capital city and elsewhere (e.g. Schoop 2006, 216). The implications are problematic as indeed chronological gaps are masked by the absence of clearly perceptible breaks in the typology of Boğazköy-Hattusa (Schoop 2003a, 168-171; 2006, 217). In addition, the formal conservatism of the central Anatolian pottery tradition over 600+ years produces severe difficulties in correlating ceramic and political-historical development (Figure 11).

Proportional variation in stratified assemblages is the key to a more fine-grained chronological understanding of this pottery. More recent work has deployed statistical methods in the analysis of ceramic complexes from the 1978-1980 (Müller-Karpe 1988, 13-15) and the 1982-1987 (Parzinger and Sanz 1992) excavations in the Upper City and from a series of find-locations from across the capital (Schoop 2003a; 2006; also Mielke 2006a for Kuşaklı-Sarissa). Among other objectives, the first two studies sought to define chronological markers (*Leitformen*) on the basis of relative shape frequencies in the last two architecturally discrete phases in the Upper City of Boğazköy-Hattusa (O.St. 4 and 3 according to Müller-Karpe 1988 and O.St. 3 and 2 after Parzinger and Sanz 1992 – the O.St. 3 and 2 nomenclature is here adopted). Schoop's (2006) investigation of ten primary assemblages from different find-locations and chronological phases has also begun to show first results. Overall, Schoop is able to trace the

development and decline of various vessel types and aspects of their formal characteristics (rim diameter, rim thickening, etc.) within functional categories across most of the MBA-LBA sequence. The result is an incipient chronological master sequence for the relative dating of NCA pottery assemblages. The value of this new approach, however, transcends the purely chronological in that new socio-economic questions related to changes in cooking or serving vessels can be highlighted. Once this study is completed, it will influence any further research on this pottery at both the capital and at surrounding sites.

In the absence of detailed statistical data, a general degree of chronological control can be achieved through the presence of chronologically sensitive shapes or their statistical predominance either at the beginning of the LBA, in the middle of the sequence, or towards the end of this period. In the following section the most frequently attested and chronologically sensitive vessel types in the Boğazköy-Hattusa repertoire will be outlined briefly. Not all vessel forms found at Boğazköy-Hattusa and other LBA sites on the northern plateau can be used definitively to trace interaction between the Hittite core and peripheral regions in the period in question, as most shapes are chronologically too insensitive or morphologically generic for this purpose. North-central Anatolia and its surrounding regions are not the only areas in LBA Western Asia and the East Mediterranean whose native plain-ware traditions experienced formal conservatism as the result of standardised production and the investment of social value in imported and local fine wares or vessels from altogether different materials. Because of the availability of alternative relative chronological sequences and of media for social negotiation, local LBA pottery assemblages in northern Syria and northern Mesopotamia, which seemingly underwent similar processes of simplification and long-term repertoire standardisation, have received varying, but generally limited, attention (Akkermans and Schwartz 2003, 331-332; Dornemann 1981; Monchambert 1983, 2004; Yon 1987; Pfälzner 1995). In this way, the standardisation and decline in formal

variety of wheel-made plain wares in LBA Anatolia acquires a wider context. Some generic but also rather striking formal similarities, especially in the rim shapes of bowls, can be found between the NCA repertoire and ceramic traditions both to the west and south-east (Figure 12).

4.3.1. Plates

So-called (baking) plates are large, shallow vessels with stepped rim-profiles, not unlike the modern variety (Figure 10). These distinctive and generally hand-made vessels are a new and prevalent component of the LBA NCA pottery assemblage with no obvious MBA predecessors (Fischer 1963, 103; Schoop 2006, 231). Coarse fabric composition designed to resist repeated exposure to heat, limited control in original firing processes and frequent traces of secondary burning point towards a function in food preparation (Müller-Karpe 2002b, 263; Schoop forthcoming). The discovery of a number of "cooking platters" within and near hearth structures at Kinet Höyük in Region F (Gates 2006, 206 note 19; Schoop, forthcoming) may further underscore a function as kitchen vessels, possibly for the baking of bread; although the Kinet Höyük "platters" are formally not the same as the NCA plates with stepped profiles. Other functions included a carrying device for a small oven (Schoop, forthcoming) and as lids for pithoi (Parzinger and Sanz 1992, 27).

Typological developments during the final part of the LBA lead to a gradual disappearance of the stepped rim profile and the proliferation of shallow bowls or platters with straight or slightly s-shaped walls and thickened rims of the type I 1.1., I 4.1. and I 4.2. (Parzinger and Sanz 1992; S2–S4a Müller-Karpe 1988) (Figure 10, Bowls 1) and to a decline in average vessel diameter (variations between 20 and 80 cm) after a peak at the turn of the 15th to the 14th century BC (Schoop 2006, 231-233). At the same time, fabric composition changes from cooking pot ware to the same

standard fabric that characterises the entire NCA assemblage (Müller-Karpe 1988, 162; Parzinger and Sanz 1992, 61; Abb. 35; Schoop 2003a, 173; forthcoming).

NCA plates with stepped rim profiles are one of the best ceramic indicators of contact and influence between Hittite centres and peripheral sites. They are an NCA development and appear at the beginning of the LBA around the time of Hittite state formation. The role of these vessels in activities primarily related to food preparation, furthermore, may indicate a transformation in local consumption and related economic and social behaviours. Spatially exclusive concentrations of such vessels in association with other NCA cultural elements may perhaps even allow the identification of the presence of Hittite imperial institutions or their personnel at surrounding sites. Conversely, the formally less distinctive shallow bowl types show generic similarities with Troy VI (Koppenhöfer 2002, Abb.12) and northern Syrian types (e.g. Caubet 1982, 77 Nr. 3; Akkermans and Schwartz 2003, Fig. 10.3.a), although the choice of bases (as well as technological details) tends to be different in each region (Figure 12).

4.3.2. Bowls

Bowls are proportionally the largest vessel group in the assemblages of the Upper City at Boğazköy-Hattusa. According to the typology suggested by Parzinger and Sanz (1992, Abb. 19) they also comprise the greatest range of sub-variations (Figure 10, Bowls 2). Bowls with inverted and sometimes internally angled and pointed rims (*Schwapprandschalen*) (Type I 3. in Parzinger and Sanz 1992; S5 and S1 in Müller-Karpe 1988), which appear in quantities at the beginning of the Old Hittite Period, are hallmarks of the Middle Hittite phase but also make up a substantial part of the early Empire Period repertoire at Boğazköy-Hattusa and Kuşaklı-Sarissa (Müller-Karpe 1988; Parzinger and Sanz 1992; Mielke 1998, 2006a, 118; Müller-Karpe V. 1998; Schoop, forthcoming). The variety within this group is significant both at the Hittite capital and at surrounding sites. Parallels, some of which are striking resemblances,

also come from northern Syria (e.g. Dornemann 1981, Fig. 13.23, 31; Monchambert 1983, Fig. 4.26) and northern Mesopotamia (Pfälzner 1995, e.g. Mitannian: Tafel 2.b-e; 3.a-d,f. Middle Assyrian: Tafel 67.c-d; 100.b,c and 101.d,e) (Figure 12).

Bowls of the type I 3. become proportionally less significant in the final part of the ceramic sequence in the Upper City of Boğazköy-Hattusa, where they are replaced by bowls with everted rims of the type I 5. (Parzinger and Sanz 1992; S4b-f Müller-Karpe 1988) (Figure 10, Bowls 3). Generic similarities can be found in the Troy VI repertoire (Koppenhöfer 2002, Abb. 12) and in northern Mesopotamian assemblages (Pfälzner 1995, e.g. Middle Assyrian: Tafel 101.c; 110.a,d and 136.d) (Figure 12).

4.3.2.1. Other Bowl Shapes

Other frequently encountered shapes (Figure 10, Bowls 4) are simple bowls with tapering rims and usually rounded bases such as I 1.2. (Parzinger and Sanz 1992; S 12 Müller-Karpe 1988). This generic type, which is too simple to be of diagnostic use in this study, shows continuity from the MBA to the LBA at Boğazköy-Hattusa and other sites on the central plateau (Fischer 1963, 65). Some of the Boğazköy-Hattusa examples have paper-thin walls and are extremely hard fired and carefully finished. It appears to have been the fine-ware of the Hittite Empire Period (Schoop forthcoming). Hemispherical bowls with thickened rims of the type I 2 (Parzinger and Sanz 1992) are a relatively rare type at Boğazköy-Hattusa and are found only in very small numbers at peripheral sites. Carinated bowls of the type I 1.3. (Parzinger and Sanz 1992; S 8, 12 e-f, S18 Müller-Karpe 1988) are also comparatively infrequent at the Hittite capital, making up about 3% of vessels found in the Upper City (Parzinger and Sanz 1992, Abb. 35). The generic shape of I 1.3. shows continuity from the *Karum* period to the end of the LBA (Fischer 1963, 66). With the exception of Tille Höyük, carinated bowls of this type have been found at all sites included in the database. Similar shapes are also known in northern Syria (e.g. Monchambert 1983, Fig. 4: 25 and somewhat

different 27 and 28;) and northern Mesopotamia (e.g. Pfälzner 1995, Tafel 9-10) (Figure 12).

Rarer vessel types at Boğazköy-Hattusa are s-shaped bowls and cups of the type I 4.3. - I 4.5. (Parzinger and Sanz 1992) as well as carinated bowls with everted rims of the type I 8. (Parzinger and Sanz 1992; S10 Müller-Karpe 1988) (Figure 10, Bowls 5). Both types are present in relatively large numbers across the eight sites investigated. The variations and general deviation from the standard forms of the Boğazköy-Hattusa repertoire in addition to a broad chronological span, however, are too great to serve the purpose of this study. Moreover, similar shapes characterise the ceramic repertoire of Troy VI (Koppenhöfer 2002, Abb. 4-8) and can be found in northern Mesopotamian contexts (Pfälzner 1995, e.g. Tafel 16.d; 19.a; 23) (Figure 12).

4.3.3. Miniature Vessels

A special type of small bowl and juglet, referred to in the literature as "miniature" or "votive" vessels (Figure 10), is another defining feature of the LBA levels at the Hittite capital and other central Anatolian sites, with possible EBA but no obvious MBA precursors (Schoop, forthcoming). According to Fischer (1963, 69, 103), miniature vessels first appear on Büyükkale Level IVc (Old Hittite Period), but the vessel type is most prominent in 13th century BC contexts. Produced mostly on the wheel from medium coarse fabrics, all miniatures show signs of careless and large-scale manufacture such as irregular profiles, string-cut bases and no surface finishing.

Miniature vessels are a relatively common inventory of the monumental temple structures of the Upper City (Parzinger and Sanz 1992, 30) and in what appears to be a sanctuary in Room III of Building C on Büyükkale (Fischer 1963, 69) as well as the "sacred pond" complex (Schoop, forthcoming). A marked concentration in contexts associated with cultic activities, the small volume and carelessly produced character of

this pottery type have tended to produce a functional ascription to the cultic sphere. Miniature vessels, however, not only occur in state related cult contexts but are also found in domestic areas (Müller-Karpe 1988, 124; 2002, 262). Most recently Schoop (forthcoming) proposed a function in social or ritual drinking as part of official ceremonies. Miniature bowls similar to the NCA tradition are known also from northern Syria (Yon 1987, Figure 21 79/574) (Figure 12).

4.3.4. Jars

NCA jar types (Figure 10) undergo a general development from a variety of rim shapes (straight, everted and constricted) in the MBA and the early part of the LBA to a single type of jar with funnel-shaped neck and horizontally everted rim (A4 Parzinger and Sanz 1992; T12-T15 Müller-Karpe 1988) in the middle of the ceramic sequence (Müller-Karpe V. 1998, 116 Abb. 15: 4 and 8; Müller-Karpe 2002; Schoop 2003b, 18; forthcoming). Besides storage functions and funerary containers (Schoop, forthcoming), pictorial evidence points at the use of such jars in the consumption of beer (Müller-Karpe 1988, 83; 2002 261). In the second half of the NCA ceramic sequence, funnel-neck vessels are gradually replaced by jars with deep carinations and long, vertical upper parts (A3 Parzinger and Sanz 1992; T1-T11 Müller-Karpe1988).

As will be outlined in detail below, almost all peripheral sites show a varying number of jar shapes reminiscent of NCA types. Due to the fragmentary nature of the evidence, however, similarities of small rim pieces may be misleading in the case of large vessel types.

4.3.5. Cooking Pots

There are two types of NCA cooking pots (Figure 10), which are distinguishable from other jars through their gritty fabric, uncontrolled primary firing conditions and frequent

marks of secondary burning (Müller-Karpe 1988, 51; 2002b, 262-263; Schoop forthcoming). Cooking pot forms, all of which are thrown on the wheel, are globular with whole-mouth rims and two vertical handles on the shoulder. The two types of cooking pots are distinguished by the nature of the rim thickening, either on the inside, which represents the chronologically older form, or on the outside in the case of the later type that gradually replaces the former during the LBA (Schoop 2006, 14-15; forthcoming). With their long chronological span and simple form, cooking pots are not a very good measure of LBA ceramic influence from the central plateau. Their absence from peripheral assemblages, however, is a good indicator of the perseverance of local cultural, and likely also demographic, conditions.

4.3.6. Closed Vessels

The most prominent closed vessels (Figure 10) of the LBA NCA repertoire are large jars with long, constricted necks and one vertical handle. Chronological developments include the gradual thickening of the rim to a wedge-shaped appearance and the transformation from predominantly round to pointed bases in the later part of the sequence. The function of these vessels was storage of liquids but also solid staples such as grain (Müller-Karpe 1988, 31; 2002b, 258; Schoop forthcoming). As with jars and cooking pots, the majority of sites have yielded small quantities of closed vessels or rim pieces with NCA stylistic affinities.

4.3.7. General Developments

General characteristics of the NCA ceramic development include the progressive thickening of rims of jugs, jars and cooking pots (Müller-Karpe 1988, 162; Schoop 2006, 228-235) and an apparent decline in the number of closed vessel types in the last phase of Upper City occupation (Müller-Karpe 1988, 162).

Throughout the LBA, the range of fabrics is limited to the coarse and gritty cooking pot ware, used also for large plates, and the ubiquitous buff grit or sand tempered paste for all other vessel types. This standard fabric comes into use with the introduction of the potter's wheel in the early *Karum* period and remains predominant until the end of the LBA (Schoop forthcoming). Increasing coarseness and diminishing attention to surface treatment characterise the development of relatively standardised and simple vessel forms.

The same is true for the limited use of decoration in the form of slips and paints. A gradual diminishing of red slipped vessels is notable after a peak in popularity in the *Karum* and Old Hittite phases, while a reverse development characterises the distribution of white-slipped vessels. In addition to red, brown and white slips, the so-called Goldglimmer ware, which does not seem to be indigenous to the north-central plateau, provides a chronological marker for the Old Hittite Period (Gorny 1995b; Schoop forthcoming). Another relatively rare trait of NCA pottery in the transitional MBA-LBA and Old Hittite phase is red or brown-red on buff painted jars and other vessels with connections to east Anatolian sites such as İmikuşağı (Konyar 1996; 2006) and, to a lesser extent, to sites in the Altınova (Schoop forthcoming).

4.4. NCA Pottery in Peripheral Contexts

In the past, NCA formal traits have been identified in numerous assemblages beyond the Hittite political and cultural core area, alongside observations of a general increase in the proportions of plain pottery ("drab ware") in the final stages of the LBA (Garstang 1953, 141-42; Goldman 1956, 183-184, 203-205; Griffin 1980, 71-76; Dupré 1983, 41-42; Korbel 1985, 10; Gunter 1991, 46-49, 2006; Mellaart and Murray 1995, 25; Summers 1993, 47-48; Henrickson 1993, 2002; Gates 2001, 138-139, 2006; Parzinger and Sanz 1992, 91; Müller-Karpe 2002b, 257). Table 24 summarises the main sites beyond the Kızılırmak basin from which NCA ceramic features have been reported.

4.4.1. Other "Ceramic Zones" in LBA Anatolia

4.4.1.1. Region C

West-central Anatolia presents a transitory region between the central plateau and the lowland areas to the west. Until the final phases of the EBA III, the region's inhabitants partook of a cultural network that encompassed central, western and southern Anatolia. Subsequent material culture developments during the final EBA III and the MBA, however, indicate a cultural polarisation between central and western Anatolia (Efe 1994a; Koppenhöfer 2002, 331-332, 360-361; Seeher 2005, 39-40). In the 2nd millennium BC, closer cultural ties are forged between Region C and the central Anatolian traditions (Seeher 2005, 39). This trend is well illustrated at, for instance, the MBA and LBA levels at Gordion (e.g. Gunter 1991, 2006; Henrickson 1993, 1994, 2002). According to Efe (1994a, Abb. 1), the cultural boundary between western and central Anatolia during the 2nd millennium BC runs west of the Pisidian Lakes northwards via Ayfon, approximately following the topographic boundary between plateau and lowland region (Seeher 2005, 39).

4.4.1.2. Region D

West Anatolia has been divided in the past into varying numbers of "pottery zones" that are for the most part distinct from the NCA tradition. French (1967, 65, 68; 1969, 75) proposed four ceramic areas in the late 2nd millennium BC, which, in his and Mellaart's view, may have equated with political subdivisions. The proposed pottery regions centre around (1) İznik, (2) the Troad, the west coast, Akhisar and Manisa as well as Balıkesir, (3) south-west Anatolia around Beycesultan and (4) the western plateau ("Hittite"). Koppenhöfer (2002) has enlarged these by another ceramic tradition, proposing five "culture provinces" (*Kulturprovinzen)* during the MBA and LBA with (1) Troy, (2) İznik, (3) Eskişehir, (4) Akhisar/Manisa and Balıkesir as well as (5) Panaztepe/Limantepe/Beyraklı and Selçuk.

4.4.1.3. Region B2 and Region G

Eastern Anatolia too has its own ceramic traditions, which, in the case of Region G, have been proposed increasingly to incorporate central Anatolian features in the course of the LBA and which form part of the following analysis. Archaeological field surveys in the highlands of Region B2, which are discussed in Chapter 5, have yielded only a small number of 2nd millennium sites, whose ceramic tradition is hand-made and influenced by Caucasian traditions. Notional NCA influence has been proposed for aspects of the north-east Anatolian ceramic repertoire (Yakar 1992, 512-514).

The southern and south-eastern limit of NCA ceramic influence is traditionally drawn along the modern Turkish – Syrian frontier, which may reflect a modern rather than LBA political logic. It also excludes Cyprus, which appears at least from the textual sources to have been under Hittite overlordship in the final phase of the LBA (Müller-Karpe 2002b, 257). The area defined as Region J1 to the west of the Euphrates is characterised by the West Syrian and Palestinian ceramic tradition during the LBA.

Sites located along the Syrian Euphrates such as El-Qitar, Tell Hadidi, Tell Munbaqa, Meskene-Emar and Tell Fray (Region J2) took part in an independent ceramic tradition but with close links to western Syria (Dornemann 1981; Caubet 1982; Pfälzner 1995, 197-203). This region too is characterised by an increase in coarser and thick-walled pottery during the LBA (Pfälzner 1995, 202).

Matthiae (1980, 48) proposed the existence of Anatolian imports at the small outpost of Tell Fray in the form of handled cups, which Pfälzner (1995, 203), however, pointed out to also have northern Syrian predecessors. Contrary to previous suggestions (Matthiae 1980), Pfälzner (1995, 204) also did not find there to be any Middle Assyrian ceramic influence at Tell Fray and on this basis he contested the role of this site as an Assyrian stronghold in the second half of the LBA.

The ceramic zone of the so-called "Mitannian" and Middle Assyrian ceramic styles lies east of the Euphrates along the Balikh, the Habur triangle as well as on the Turkish Upper Tigris (Pfälzner 1995, 169-232, Abb. 135 and 136; Roaf and Schachner 2005, Fig. 1-2).

4.4.2. Local Production of NCA-style Ceramics

NCA-style ceramics, with the exception of some, usually early, imports are conventionally held to be of local manufacture (Goldman 1956, 205; Fischer 1963, 89; Kalsbeek in Griffin 1980, 6; Korbel 1985; Gates 2001, 137; Symington 2001, 169). Neutron Activation Analysis of LBA pottery from Gordion has demonstrated its local origins (Henrickson and Blackman 1996, 77), while optical petrologic and chemical analyses on the pottery from Kilise Tepe also indicate a regional source for the standard buff LBA fabric type (Knappett, in print). In addition, the difficulties of overland transportation and the primarily open shapes of this simple pottery make large-scale export seem indeed unlikely (Müller-Karpe 1988, 163).

4.4.3. Site Choice

The sites of Porsuk, Gordion, Beycesultan, Aphrodisias, Tarsus, Korucutepe, Norşuntepe and Tille Höyük were chosen for analysis on several grounds. While more recent excavations are taking place (e.g. Kinet Höyük) or have recently been concluded (e.g. Kilise Tepe), my requirement for final publication of the ceramic evidence restricted the choice of sites. Another guiding consideration was the compilation of a representative sample of Anatolian regions in order to be able to document site, or regionally specific, ceramic trends and to detect potential differences in imperial-local relationships. The selected sites provide regional perspectives on north-west central, western, south-central, southern and eastern Anatolia. These regions not only have very different historical trajectories, cultural traditions and

contacts prior to and during the 2nd millennium BC, but are also reported by the textual sources to have had diverse relationships with the Hittite empire (Chapter 3).

4.4.3.1. Region A3

4.4.3.1.1. Porsuk

The mound of Porsuk (Map 8) is located on the southern fringe of the central Anatolian plateau and controls access to the Cilician Gates, one of the few passes through the Taurus range. The site is also situated in close vicinity to the silver and iron ore mines of Bolgarmaden. An ingot mould containing lead residues was found in a 13th century BC context (Chantier 2, B3-B4) (Pelon 1992, 342), suggesting Porsuk's involvement in the exploitation of and control over metal resources in the region.

The mound (ca. 6.3 ha) was excavated between 1969 and 1977 and with interruptions from 1986 to the present day (Pelon 1970; 1972; 1992; Beyer et al. 2004, Beyer 2006). Excavation areas Chantier 2 and 4 have yielded the majority of the LBA evidence. In Chantier 2, pottery was found in and around the triangle created by the massive contemporary fortification wall (Map 9), which was also encountered in Chantier 4 in addition to pottery from the interior of the so-called *pièce hittite* (K2) (Map 10) and a deep sounding in H2. The material of only one level, Niveau V, was included in the original ceramic report and compared to Büyükkale IVb-a-III and Lower City 2-1, which would cover the second part of the LBA (14th-13th centuries BC) (Dupré 1983, 41).

Subsequent excavations revealed another, earlier, occupation level (Niveau VI), which was dated preliminarily to the Old Hittite Period (Pelon 1992, 332, 347; Beyer 2006, 67). Much of this earlier level, however, had been destroyed in building Niveau V (Beyer et al. 2004, 276). In Chantiers 2 and 4, the development of the fortification wall, including a postern passage, was traced over several construction stages until the final destruction of the LBA settlement (Pelon 1992, 320, 332).

The catalogue of the LBA pottery from Porsuk represents only a sample of shapes common at the site (Dupré 1983, 19-20). Usually, several variants of each formal sub-type are illustrated and variations in dimension, fabric composition and surface treatment highlighted. No information on the original sherd count or retention and study methods is, however, supplied. The total of 241 published vessels and fragments necessarily renders the relative frequencies of fabric and formal types proposed by Dupré (1983, 27 and 40) questionable. Of these, 203 are accompanied by illustrations and have been included in my database.

The pottery of Porsuk Niveau V shows a number of links to the NCA ceramic tradition (see Figure 13, Figure 14 and Table 25). It is predominantly wheel-made with hand-made cooking pots. The majority of vessels are of medium fine clay with inorganic temper; occasionally, organic material was added for cooking vessels. In comparison to other LBA II assemblages, a large proportion of sherds from Porsuk appear to have been either slipped (22%) or covered by a wash (14%), although selective publication in favour of finer vessels may be the source of this impression. The remainder is either smoothed (2.5%) or burnished (33.5%) and one third of sherds are recorded with no visible surface finishing (28%).

The most direct and prominent of the connections with the NCA tradition are plates with stepped rim profiles of which 11 were included in the final publication (Figure 31). Of these, seven are made of coarse, gritty fabric while four are of medium coarse fabric. Seven vessels are reported to have been burnished. Diameters range between 37 and 50 cm with ten vessels showing cord impressions on the outer rim. The stepped profiles of many of these plates are pronounced and angular. In contrast, the published assemblage from Porsuk Niveau V does not include shallow bowls with simple rounded or thickened rims of the type I 1.1., I 4.1. and I .4.2. (Parzinger and Sanz 1992), which gradually replace traditional plate forms in the final part of the Empire Period.

The assemblage of 95 bowl rim fragments presented in the catalogue is dominated by bowls with inverted or internally profiled rims of the type I 3. (Parzinger and Sanz 1992), which make up 48% of published bowls. The majority of these bowls are made of the standard medium fabrics firing from brown to orange and red, which are recorded with burnished surfaces. Six bowls show partial red burnished slips and a further six carry a greenish-white wash. The proliferation of I 3. bowls in Niveau V contrasts with the total absence of everted-rim bowls (I 5.), which is likely to have chronological implication. The assemblage of Niveau V does not display ceramic features characteristic of the last occupation phase at the Upper City of the imperial capital. This may indicate that the site did not reach this phase and was destroyed before the final abandonment of Boğazköy-Hattusa (Parzinger and Sanz 1992, 94). This conclusion is supported by the Red Lustrous Wheel-made spindle bottle found in the destruction horizon and dendrochronological data from the postern gate that indicates a date around 1549 +4/-7 cal. BC for the felling of the trees used in its construction (Kuniholm et. al. 2005, 45; Mielke 2006c, 87-88).

The remainder of bowl shapes is characterised by a relatively large proportion (20%) of carinated bowls with everted rims (I 8.), followed by 14% of hemispherical bowls with pointed rims (I 1.2.), the majority of which are either red or white slipped or washed. Simple carinated bowls (I 1.3.) account for 6% of the published bowl record. Vessels with sinuous walls of the variety I 4.3.-5. are found in small quantities (5%). NCA-style miniature vessels, in the form of both bowls/cups and juglets, are absent from the Porsuk repertoire. However, two types of handled drinking cups find parallels at Boğazköy-Hattusa (Fischer 1963, Tafel 82).

A number of jar types from Porsuk Niveau V also show links to the NCA tradition. Besides several small jars (A 6), at least six vessels resemble the funnel-mouthed jars characteristic of the earlier part of the LBA sequence. No examples of carinated jars

with long vertical walls and everted rims can be found in the published assemblage of Niveau V. Cooking pots make up 23% of the published assemblage and are divided in equal numbers, possibly as part of the publication strategy, between vessels of the older variety with internal thickening (22 vessels) and the later type with everted and thickened rim profiles (23 vessels).

Among the very few closed vessels published by Dupré (1983) are two trefoil jugs and one lentoid flask. Special vessels include a small teapot and *bibron*, a vessel resembling urns from Osmankayası (Fischer 1965, Nr. 581) as well as four cream slipped and painted sherds. The only obvious imports to the site are fragments of two Red Lustrous Wheel-made Ware spindle bottles (Dupré 1983, Nr. 247, 249) and a libation arm (Dupré 1983, Nr. 250), which appear in Anatolia in the 14th century BC.

The *pièce hittite* in area K2 has yielded the only sufficiently published pottery inventory of a Niveau V architectural unit to allow some insights into the social context of NCA-style pottery at the site. It is not known whether the published pottery from the *pièce hittite* derives from floor deposits or includes also fill, but the general impression is that of a domestic structure dominated by bowls, cooking pots, jars and plates with no signs of a special or elite context or restricted access/utilisation to NCA pottery.

4.4.3.2. Region C1

4.4.3.2.1. Gordion

The mound of Yassıhöyük-Gordion lies in the plain of the river Sakarya about 100 km south-west of Ankara. The site and adjacent MBA-LBA I cemetery (Mellink 1956) have been excavated regularly since the 1950s. LBA occupation levels and pottery (Gunter 1991) were found in two deep soundings (Map 11 and Map 12) dug in 1950, 1961 and 1965. Aspects of the LBA pottery from ongoing excavations have been published in several articles by Henrickson (1993; 1994; 2002; Henrickson and Blackman 1996).

The present study considers only the fully published material presented by Gunter (1991).

The two deep soundings were dug below the Phrygian Megara 10 and 12. Levels NCT IVC to IVA of the Megaron 12 sequence span the period between the final MBA and an EIA transitional phase. This approximately equals Levels NB 13-5 in Megaron 10, from which the majority of ceramic evidence derives (Gunter 1991, 46). With the exception of Level 9 in the Megaron 10 trench, all ceramic finds recovered from the two soundings were retained by the excavators and make up ca. 7000 sherds. The publication catalogue contains diagnostic fragments representative of the principal shape classes of each phase (Gunter 1991, 27); of these a total of 299 are included in the database.

Both trenches have yielded habitation debris and pits but no coherent architectural features, which would allow contextual identification (Gunter 1991, 2-4). More recent excavations of LBA rubbish deposits and wash strata with large pits produced semi-subterranean house structures (Henrickson 1993, 1994, 2002; Henrickson and Blackman 1996).

The LBA Gordion ceramic assemblage displays even closer ties to the NCA ceramic tradition than Porsuk in that a larger variety of vessel types and sub-forms are represented in its repertoire (see Figure 15, Figure 16 and Table 25). These include forms that are not among the most common shapes at the imperial capital itself (Figure 32).

The first interesting pattern emerges from the chronological distribution and relatively small quantity of plates at Gordion. All five published examples come from LBA II levels (Levels 6-8) below Megaron 10. With one exception, all plates are made of a gritty

orange-buff fabric and one is covered by a buff slip on the interior. Rim diameters range between 28 and 60 cm. In contrast to Porsuk, a small number of shallow bowls (I 1.1., I 4.1. and I 4.2.) were also found at Gordion.

The most common vessel category in the Gordion publication are bowls (45% of the total assemblage). The most prominent shapes are inverted rim bowls of the type I 3. (27% of represented bowl types), followed by carinated bowls with everted rims (I 8.) (13%). Hemispherical bowls with tapered rims (11%) and bowls with everted lips (I 5.) (8%) are also present. Only one miniature bowl has come from LBA II contexts. Larger vessels display a wide formal range, many of which match NCA types.

The MBA-LBA Transition

Breaking the Gordion sample down into finer chronological steps, the ceramic repertoire of the MBA-LBA transition, features vessel shapes typical for the earlier part of the LBA such as bowls with inverted rims (I 3.), but no plates. Represented are hemispherical bowls with tapered rims (I 1.2.) and various carinated and everted rim shapes (I 8.). Besides vessels with s-shaped profiles (I 4.3.- 5.), three bowls have everted rims (I 5. and I 6.). Five vessels resemble the typical MBA form of the "bead-rim" bowl. Both jars and cooking pots carry the formal characteristics of early types, with internal rim thickening in the case of cooking pots and flaring rims for jars. Closed vessels include a beak spout fragment with lustrous red slip. About half of all the vessels from the MBA-LBA I levels of Gordion are slipped and burnished.

The LBA I

The composition of the pottery assemblage from Gordion LBA I layers shows continuity from the previous layers in terms of its formal spectrum as well as the proportion of slipped vessels (62%). Absent still are plates and shallow bowls. Bowls with inverted rims (I 3.) account for one third of the published bowl repertoire, followed by bowls with simple pointed rims (I 1.2.) and s-shaped bowls (I 4.3.- 5.) as well as doubly carinated

variants (I 8.). Three rim fragments belong to bowls with everted rims (I 5. and I 6.) while a further three vessels are related to the "bead-rim" tradition of the MBA.

The spectrum of jar rims represented in the LBA I sample from Gordion comprises variants of all major types from Boğazköy-Hattusa, including jars with flaring rims, types with horizontal upper bodies and everted lips as well as rounded jars. Cooking pots of this level are mostly of the older variety, with three more recent, everted rim fragments. Only one closed jar rim, however, closely resembles standard NCA profiles (E 2.4.).

The LBA II

The formal repertoire of levels dated to the LBA II from Gordion shows a number of transformations and additions with characteristic NCA influence. First of all, typical NCA-style plates appear in Level 8 and continue until Level 5 below Megaron 10. Also from Level 8 came a crudely-made miniature bowl. Bowls with inverted and internally profiled rims still make up the largest proportion of the published bowl repertoire (31%) in the second half of the LBA. Other frequent shapes are carinated bowls with everted rims (I 8.) (14%) and bowls with simple pointed (I 1.2.) (12%) and everted rims (I 5. and I 6.) (13%). For the first time represented in the Gordion repertoire are simple shallow bowls/platters, which are a defining features of the last phase of ceramic development at the Hittite capital.

Cooking pot forms are dominated by the later variant with external rim profiling, while the more common jar rims are types characteristic of the middle part of the NCA LBA sequence. Several closed vessels with external rim strengthening show similarities with types from Boğazköy-Hattusa.

Wheel-made pottery with similarities to the NCA ceramic tradition continues into the EIA at Gordion with bowls of the I 3. and I 4.1.-I 4.2. variety alongside other, more generic bowl forms.

Several developments can be traced from the Gordion material. To begin with, it is interesting that typical NCA-style plates appear only in the last LBA II levels (1991, 108 Table 2). In the same layers we find a miniature bowl, whose chronological focus is the 13th century BC at least at the Hittite capital. Conversely, internally profiled rims dominate the published bowl assemblages in all three phases. Bowls with everted rims are present in all phases but increase in the LBA II, together with shallow bowl types. Throughout the LBA, strong parallels can be made between closed vessel forms at Gordion and NCA types. To summarise, there are broad similarities between the Gordion and Boğazköy-Hattusa assemblages from the transitional MBA-LBA I phase. However, definite LBA NCA ceramic influence is identifiable only in the last LBA strata. West of Gordion, "Hittite" pottery has been reported from Şarhöyük-Dorylaion (Darga and Starke 2003).

4.4.3.3. Region D

The LBA pottery of Beycesultan, alongside that of Aphrodisias, has in a recent article by Gates (2001, 141; also Müller-Karpe 2002b, 257 on Beycesultan) been mentioned as part of the phenomenon of, in her view, imperial standards of ceramic production. While even superficial examination of the published pottery from these two sites makes this proposition unlikely, Beycesultan and Aphrodisias are included in this discussion as boundary indicators for the west-ward extension of LBA NCA ceramic influence. Together with Troy, whose LBA pottery forms a separate Anatolian tradition, Aphrodisias and Beycesultan are the only LBA settlements in Western Anatolia whose materials have been published in a final format. Only limited information is available from ongoing excavations at the coastal sites of Panaztepe, Limantepe and LBA

Miletus (Koppenhöfer 2002 for a summary). The vast majority of pottery from Miletus is reported to be of Mycenaean style, with other ceramic traditions accounting for about two percent of the recovered material (Niemeier and Niemeier 1997).

4.4.3.3.1. Beycesultan

The mound of Beycesultan (Map 13) is located near the modern town of Çivril on the Meander river, one of the communication routes between the plateau and the Aegean coast. A depression divides the site into two summits, both of which have yielded LBA occupation during the excavations by Lloyd and Mellaart between 1954 and 1959.

Level III was the first LBA stratum with substantial architectural remains following the destruction of the MBA settlement (Level IV) and subsequent small-scale squatting (Lloyd 1972, 4). On the east mound (Map 14), two parallel streets were unearthed over an area of ca. 30 m^2, which were lined by buildings that the excavators interpreted as domestic dwellings (Lloyd 1972, 7-8). A retaining wall appears to have framed this settlement complex on the northern edge of the mound. None of the houses of Level III stand out either though their architecture, location or finds as more elaborate or substantial.

As in the previous phase, Level II buildings were arranged along two parallel streets (Map 15). Although the majority of structures were identified as stables and domestic houses, a more specialised function was proposed for Megaron A on the northern fringe of the excavated area. Here, a series of narrow rooms allowed access to a traditional megaron hall (8 x 3.5. m) with central round hearth. Attached to it in the east were two rooms with separate entrances (Lloyd 1972, 12). Directly accessible from the northern street, Room 14 contained two rows of eight pithoi, filled with wheat, barley and lentils, in addition to a grain bin made of wood and mud-brick. Further finds in Room 14 included a ceramic basin containing what is referred to in the excavation

report as a complete "service" of intact vessels with silver-slips as well as numerous bowls and saucers strewn on the floor (Lloyd 1972, 13; Pl. VIIb). A paved passage outside Room 14 lead north to the entrance of Room 13, which featured a built internal division, two pithoi and a pile of chalices. Along with a large number of knucklebones and crescent shaped terracotta objects, eight human skeletons covered the remainder of the floor space. Room 13 was described as "bar" and Room 14 as a "shop" by the excavators (Lloyd 1972, 12). The content of both structures points towards a concentration of longer-term storage facilities, either of central or communal nature, not reported from elsewhere at the site, but of a much smaller scale than at Boğazköy-Hattusa. Interesting in this respect is that although physically part of Megaron A, access to these two rooms was apparently not directly controlled by it.

The destruction of Level II followed two levels of re-occupation at the end of the LBA (Levels Ia and Ib). The east mound settlement of Level Ib retained the previous layout along the two streets (Map 16). The destroyed Megaron A, however, was not rebuilt in its original format and the southern part of the settlement appears not to have been occupied in this phase (Lloyd 1972, 17). The area between the two streets underwent a change in architectural layout. Lloyd (1972, 17) described this area as a complex of domestic units, whose basic building block was a three-roomed house with one rectangular main unit flanked by two smaller rooms on its long wall (Rooms 17, 18 and 19). The area to the west, an open space, appears to have been paved with white gypsum plaster, interrupted on its summit by two stone slabs with associated pits containing animal bones. Above this installation was built the megaron structure of Level Ia, the only building found on the east mound from this transitional LBA-EIA phase.

On the west mound, two complete domestic buildings and a partial third structure belonging to Level II were excavated in Area A in 1954 (Lloyd 1972, 19-20) (Map 17).

Installations such as hearths and a pottery repertoire from storage pithoi with carbonised lentils and a range of bowls, jugs and fruitstands indicate a primary domestic function of the first structure. The second house to the south featured a brick platform and ornamented terracotta horns and was described as a shine in the report (Lloyd 1972, 20). A single, relatively small building belonging to Level III was found underneath the Level II occupation.

To the north of Area A on the west summit, both Levels III (Map 18) and II (Map 19) yielded two buildings with horn-shaped installations (Lloyd 1972, 24-37). Termed East and West Shrines, the two structures yielded only very limited pottery finds in Level III and showed no signs of destruction by fire. The Level II rebuilding reused existing walls (Lloyd 1972, 27). The inventory of the eastern shrine in Level II is rich in pottery finds including a cooking pot and a series of closed jars and jugs as well as pouring and drinking vessels. No Level I occupation was recovered in Area R.

The chronology of Beycesultan in comparison with other Anatolian sites and in absolute terms has been a rather contentious issue. Mellaart (Mellaart and Murray 1995, 96) identified Level III as belonging to the 14th century, Level II as stretching from the 13th to the early 12th centuries and Levels Ia and Ib as dating to the 12th to 11th centuries BC. Further in his discussion, Mellaart (1995, 100) however, refers to the period from Level III to Ib as 1450-1200 BC. Commentators accustomed to a central Anatolian perspective have made comparisons between Beycesultan II and I and Old Hittite levels at Boğazköy-Hattusa (Fischer 1965, 88-89). Mellaart (Mellaart and Murray 1995, 94), however, insists that although Beycesultan II and I show similarities with the more elaborate, and earlier, vessel types of the NCA tradition, they occur at the same time as "inferior products with Hattusa affinities" such as coarse plain bowls and plates. Thus, he suggests that Beycesultan although receiving NCA cultural influences, did not

follow Boğazköy-Hattusa fashions in ceramic manufacture and argues against a "Hittite ceramic straight jacket" for the site (Mellaart and Murray 1995, 94, 108).

The pottery from Beycesultan Levels III-I has recently been published in final form (Mellaart and Murray 1995). While the publication features a comparatively large number of illustrations (604 pots were included in this analysis), no indications of the total number of recovered vessels or methods of analysis are given. The emphasis on the publication of complete or restorable as well as exotic types, however, is evident. Only a sample of recovered vessel shapes is, thus, available. General excavation areas rather than architectural units are used to indicate the provenance of individual pots, which unfortunately makes detailed reconstructions of house or room inventories impossible.

On a superficial level of analysis one is struck by the sheer variety and elaboration of the LBA ceramic tradition of Beycesultan in comparison to that of Boğazköy-Hattusa and other NCA centres. Throughout the LBA, buff-ware wheel-made vessels dominate the assemblage while the majority of pottery from each of the three Levels was either slipped and burnished/polished or covered by a wash. In the final report, vessel treated in this way range between 77% (Level III), 82% (Level II) and 65% (Level I), although an even higher percentage is quoted by Mellaart (Mellaart and Murray 1995, 1). In addition, a number of vessels shows additional decoration in the form of grooving, painting and applied plastic features or a combination thereof. The decline in numbers of slipped and washed vessels, ranging from red, brown and orange colours to gold and silver slips, in the last part of the LBA/EIA is underlined by the increase of vessels with no surface treatment in Level Ib (ca. 30%). Yet even with only 52% of vessels with slipped or washed surfaces in Level Ib, Beycesultan clearly was part of a different ceramic tradition than that of the NCA plateau, in terms of both organisation of production and the role of pottery in local social practice.

In terms of formal characteristics, LBA pottery from Beycesultan is rooted in the local west Anatolian tradition known from the MBA levels of the same site. Level III is described by the excavators as a period of ceramic renaissance in which also a variety of new shapes appear (Mellaart and Murray 1995, 5, Nr. 17, Fig. P.5.5). Innovations include footed cups, chalices, fruit-stands, "beer-mugs", *askoi*, and craters, all associated with drinking and social display, as well as pithoi with decorated bands (Mellaart and Murray 1995, 2). Level III also yielded a fragment of a Mycenaean stirrup jar (Mellaart and Murray 1995, 5; Nr. 23, Fig. P.6.11). The pottery of Level II is essentially the same as in the previous phase. Innovations appear to occur mainly in the category described as kitchenware (Mellaart and Murray 1995, 22). These include round-bottomed cooking pots, baking platters and large carinated bowls. After the destruction of Level II, the ceramic repertoire of Level Ib continued pervious traditions but with new elements both in terms of ware and formal types. New types of Level Ib and Ia make up half of the shape spectrum, accounting for a repertoire characterised by formal diversity, very unlike that of NCA sites at the end of the LBA. Some of the drinking cup types of previous levels disappear in Level I, while preferences from bifoil and trefoil mouthed jugs shift to round-mouthed examples, *askoi* are replaced by pilgrim flasks, and beak spouted vessels are said to multiply (Mellaart and Murray 1995, 57). Among the imported vessels are fragments of Red Lustrous Wheel-made libation arms (Mellaart and Murray 1995, Fig. P.41.2 and 3).

Shape-by-shape formal comparisons between the Beycesultan material and the Boğazköy-Hattusa typologies equally point towards limited direct cultural influence (see Figure 17, Figure 18 and Table 25). Similarities are mostly confined to generic shapes, which are either present in earlier levels at Beycesultan or can be found in other traditions. In addition, there is much variation in the various sub-forms, which make comparisons with the more standardised Boğazköy-Hattusa material difficult and render the classification of shapes arguable.

Two generic plate forms of coarse and gritty clay come from Level Ib contexts on the east mound, although other vessels may be local variations on this theme (Figure 33), together with a "baking platter" with rope impressions. Also from Level Ib are two examples of shallow bowls (I 1.1.), while bowls with inverted rims (I 3.) are most numerously represented in Level I (15 examples). Four examples of the latter type are published from Level II, with the majority of vessels either slipped or washed. Bowls with rim strengthening or everted rims (I 4.1.-2. and I 5.) are represented in all three levels at Beycesultan, albeit with a concentration in Level I.

Most numerous in all levels are generic simple or carinated bowls (I 1.2. and I 1.3.) as well as s-shaped and carinated bowls with everted rims (I 8.), which have local predecessors and are found widely in almost all contemporary ceramic traditions. Two possible miniature vessels, a bowl and a juglet, come from Level II and Ib respectively.

Besides a number of beak-spouted jugs, which also have local predecessors and some of which show painted decorations similar to examples from Aphrodisias (Mellaart and Murray 1995, P.38.7; P.38.8), forms such as tall necked jugs (Mellaart and Murray 1995, P.40) and a vase with lug handles from Level I (Mellaart and Murray 1995, P.48.2), the majority of vessel types from Beycesultan do not in general conform to the plateau tradition.

This then, points towards only very limited and possibly circumstantial interaction between the central plateau and inland south-west Anatolia. The little evidence for such cultural influence concentrates on the last phase of occupation, whose date is still unclear. In conclusion, NCA ceramic influence (whether a material indicator of the existence of an economic or cultural network or of a political strategy) only touched lightly on the inhabitants of Beycesultan.

4.4.3.3.2. Aphrodisias

Aphrodisias (1.2 ha Acropolis mound) is located in the Dandalas river valley, a tributary of the Upper Maeander in south-west Anatolia (Map 20). Acropolis Trench 8 (Complex A-4) contained the majority of recovered LBA materials and was excavated between 1971 and 1972 (Joukowsky 1986; Marchese 1976, 393-394). Due to later construction and terracing as well as the size of the excavation area (ca. 80 m^2) little architectural information is available and the extent of the LBA settlement remains unknown.

Aphrodisias Level IV is dated to the 13th century BC by the excavators and is subdivided into three phases. Phase III (Map 21) presets a domestic context with pottery finds, storage facilities and loom-weights (Joukowsky 1986, 149). The following Phase II (Map 21) consisted of a fill of ceramics, ash and charcoal and four pits, while subsequent Phase I (Map 22) featured part of a structure. Few artefacts were recovered from Phases II and I (Joukowsky 1986, 149-150; Marchese 1976, 401). Of 6609 LBA ceramic fragments found at Aphrodisias, 206 (of which 43 are painted body sherds) were published and sufficiently illustrated to be included in the database.

The most striking difference between the Aphrodisias assemblage and contemporary traditions on the NCA plateau is the high proportion (65%) of vessels with slips and washes in gold, silver, shades of red, brown and white, while 42% of the published pottery has painted decoration. In terms of formal characteristics too, Aphrodisias develops in a very different way from NCA (Figure 19, Figure 20 and Table 25).

Among the few shapes with superficial similarities are generic bowl types (I 1.2. - 8% of bowls; I 8. -16% and I 4.3- 5. -26%) (Figure 34). Two jar rims closely match NCA types with funnel necks and horizontal rims in addition to five pithos rims. The remainder of the formal repertoire of LBA Aphrodisias is distinctively different to contemporary NCA

assemblages. A kantharos and beak spouts with painted stripes have close parallels at Beycesultan.

4.4.3.4. Region E

The pottery from Kilise Tepe Level III (Symington 2001; Hansen and Postgate, in press), the only excavated LBA site in the Göksu river valley, shows a number of connections to the NCA tradition in addition to large numbers of Red Lustrous Wheel-made imports and coarser red-ware examples. Similar to the situation of Porsuk, the repertoire of Level III features vessel forms most prominent in the first part of the LBA. A destruction level followed by a clear architectural break and the introduction of new, frequently painted, shapes (square-rim jars and grooved-rim bowls) mark the beginning of Level II, which dates to the final LBA (Hansen, in press; Postgate in press, 24). A measure of continuity is established by the perseverance of several NCA-style formal types such as shallow bowls with inturned rims (I 3.) in the early phases of Level II (Postgate in press, 26).

4.4.3.5. Region F

4.4.3.5.1. Tarsus

The mound of Gözlu Kule at Tarsus is located in western Cilicia about 10 km inland from the coast and occupies a strategic position on the southern end of the communication route through the Cilician Gates, whose northern entrance appears to have been controlled by the site of Porsuk. Tarsus (Map 23) was excavated between 1934 and 1939 as well as in 1947 and 1948 (Goldman 1956). At the time of excavation, the site consisted of two elevations connected by a saddle (Goldman 1956, 3). Deep soundings in Section A (Map 24) on the eastern part of the mound reached Neolithic levels and documented habitation throughout the following millennia including the LBA. In Section B (Map 25) excavations stopped once LB IIa occupation levels had been reached.

The original excavation report presents the Tarsus pottery divided into two periods, the LBA I and LBA II. The sequence of architectural levels, however, is more complex than this standard subdivision and the re-examination of pottery and field notes by Slane (1987) shows that there are a number of unsolved problems concerning stratigraphic relationships and the exact architectural contexts of pottery and other finds. Slane has subdivided Goldman's (1956) MBA to LBA architectural sequence into ten levels in Section A, and three levels in Section B. Following this sub-division, Levels IV and V in Section A mark the transition between MBA and LBA. A date in the Old Hittite Period has been proposed for Level IV, the so-called Pottery Store Room, by both Symington (1986) and Slane (1987, 372) on somewhat different grounds. Levels VII-VIII define a transitional phase of rather ill-defined architectural features between the Pottery Store Room and the so-called "Hittite Temple", a monumental structure, whose partially excavated ground-plan has been likened to temple structures at Hittite centres. Level A.IX defines this stratum of architectural flourit. Contemporary levels in Section B (Level B.IX.1) have yielded large, multi-roomed houses with evidence for domestic activities and stable functions. Goldman (1956, 59) also proposed that Hittite hieroglyphic seal impressions and a fragmentary text found in an LB IIb (Level X) pit (36.69) originally belonged to the LB IIa East House (see Chapter 6).

It is difficult to characterise the nature of the LBA occupation in Section B and it is tempting to offset the official, monumental building in Section A with a more domestic scenario in Section B. The glyptic finds in this area, even if they could have been brought in from elsewhere on the site and discarded above the East House, as well as the substantial character of the houses, however, could also point towards an elite complex with close ties to a central authority.

My pottery analysis concentrates on the final publication by Goldman (1956) and includes a total of 278 pieces from Levels LB I and LB II. In addition, I use Slane's

(1987; also Symington 1986) reanalysis of architectural levels and associated ceramic evidence for further chronological fine-tuning. In 1987, Korbel published around 500 pottery drawings and fabric descriptions of material not presented in the final excavation report by Goldman (1956). These are included here to gain the most complete picture of the formal repertoire of the site. The small number of sherds or vessels with detailed contextual information in the original excavation report hinders any rigorous contextual analysis of the ceramic data.

Level LB I

From the schematic breakdown of vessel shapes in Figure 21, Figure 22 and the summary in Table 25, a clear ceramic development is discernable between Levels LB I and LB II (Goldman 1956, 203). The ceramic repertoire of LB I (Levels IV to VI in Slane 1987) is characterised by the continuity of Cilician/Syrian painted traditions on the one hand and the increasing use of monochrome slipped and burnished wares on the other. Additional features include imported grey wares, providing a link to the Amuq plain. Red and brown slipped and burnished monochrome vessels have induced comparisons of this material with *Karum* period settlements on the central plateau in the past (Mellink 1992, 118-120; Fischer 1963, 90) but have been shown to be more likely to date to the LBA I (Goldman 1956, 183; Symington 1986; Slane 1987, 371-373).

Shapes recognised in previous studies as of NCA character include a "bath tub" (Goldman 1956, Nr. 1054) found in the Later Terrace Building, fruitstands (Goldman 1956, Nr. 974-977), carinated bowls with and without handles, funnels (Goldman 1956, Nr. 1061, 1062; Slane 1987, 369) and a one-handled flask (Goldman 1956, Nr. 1024) from the Pottery Store Room (summary from Symington 1986, 281-282). A number of red-slipped and burnished closed vessels also have generic parallels in late MBA and early LBA central Anatolia (Slane 1987, 367-369).

The results of my analysis indicate that similarities in carinated bowl shapes and a series of hemispherical examples with tapered rims (I 1.2.) are responsible for the comparatively large number of NCA-style bowl types at the site (Figure 35). Two examples of shallow bowls with thickened rims (I 4.2.) (Slane 1987, Nr. 461 and 462), which are included as "plates" in Slane's catalogue, present further links to the plateau.

Rare in the LB I repertoire are bowls with inverted rims (I 3.), which are attested in only one instance and without contextual information. Also absent are coarsely made miniature vessels. Generic similarities can be found in a small number of jar rims and two pithoi. The majority of jar types and cooking-pot shapes, however, are different from NCA types. Level LB I cooking pots are, furthermore, handmade and show continuity from the MBA until the end of the LBA (Slane 1987, e.g. Nr. 88, 103, 367, 469, 546).

A large number of closed vessels are published from Level LB I and the vessel group made up of jugs, flasks and long-necked bottles display great formal variation. Among the jugs irregular mouth shapes and beak spouts predominate, but in Level V the first horizontal circular rims appear (Slane 1987, 312 Nr. 366). As Slane (1987, 371) pointed out, formal relations between NCA and Tarsus LB I are evident but not exact.

Level LB IIa and LB IIb

In the following LB II levels, as far as this can be determined from the excavation report, the assemblage was dominated by monochrome plain or smoothed pottery (Figure 35). For the first time, NCA-plates with stepped profiles appear at Tarsus. A typical example of this vessel type is illustrated by Goldman (1956, Nr. 1121), while an additional plate has a less pronounced rim (Nr.1134). Further examples from LB IIa (Level IX) are illustrated by Slane (Slane 1987, Nr. 603, 645) and five more from the subsequent LB IIb (Level X) (Slane 1987, Nr. 662, 664, 665, 689, 690). This seemingly

suggests a virtually uninterrupted production/use of this pottery type before and after the destruction of the monumental structure of Level LB IIa. One simple shallow bowl (I 1.1.) could also be identified.

Other bowl types also show close connection to the NCA tradition. More numerous than in the previous level are types with inverted rims (I 3.). Shallow bowls with thickened rims (I 4.1.) (also Korbel 1987, Tafel 8.178, 8.190; and I 4.2. - Slane 1987, Nr. 537, 540, 541, 583, 602, 653; Korbel 1986, 8.386) are relatively numerous. As with NCA-style plates, the production of shallow bowls with thickened rims clearly continued in the post-destruction levels (Slane Nr. 663, 666). Other characteristic shapes of the latest phase of NCA ceramic development are largely absent from Tarsus (Parzinger and Sanz 1992, 95-96). One example with everted rim (I 5.) is illustrated by Slane (1987, Nr. 654).

Represented only in small numbers are hemispherical bowls with tapered rims (I 1.2.) and simple carinated bowls (I 1.3.), while none of the previously popular large carinated bowls with everted rims (I 8.) appears to have come from LB II layers. More numerous are bowls or basins with everted rims (I 6.) (Korbel 1987, Tafel 10.179, 28.192, 28.337). Pre-firing potmarks in the form of simple incised symbols are another feature of LB II shallow, open shapes, which appear for the first time in the intermediate Level VII-VIII (e.g. Goldman 1956, e.g. Nos. 1040, 1065 1133, 1132, 1136, 1137, 1138, 1139, 1141, 1145, 1146, 1147, 1148, 1149, 1150, 1152, 1178; Korbel 1987, Nos. 194, 195, 196, 197, 198, 199, 100, 201, 202, 204, 205, 206).

Miniature vessels with NCA affinities in the form of bowls and juglets are also a feature of Level LB IIa (Level IX) (also Slane 1987, Nr. 421, 431-432). The first miniature bowl comes from the intermediate levels (VII-VIII) below the monumental structure in Section A (Slane 1987, Nr. 539). Three miniatures, two bowls and one juglet, were

found associated with the monumental structure in Section A, one pitcher and two bowls come from the contemporary East House and one bowl and two juglets belong to the destruction horizon above (Level B IX.2). Slane mentions altogether 16 miniature vessels from post-destruction contexts (Slane 1987, 445-459).

Jars from LB II levels at Tarsus show continuity from previous levels with some new introductions, which, however, do not resemble NCA shapes. In the architecturally most impressive phase of LB IIa, storage jars account for one third of recovered vessels according to Slane (1987, 424).

General parallels can be drawn between a number of profiles with everted rims and Boğazköy-Hattusa jar and pithos shapes as well as with wide-mouthed jars with carination, vertical upper body and everted rim (Goldman 1956, Nr. 1206; Nr. 389 C to F, M, L, O and Q; Nr. 390 I). Generic pithos shapes (Goldman 1956, Nr. 390 E and F) correspond to Boğazköy-Hattusa types, while cooking pots from transitional layers (VII and VIII) to LB II levels are handmade and burnished and continue a local tradition (Slane 1987, 383, 424; Nr. 524, 546).

As in previous levels, closed vessels display a remarkable formal diversity (Slane 1987, 421). Jugs have mostly irregular, trefoil mouths. Two tall-necked bottles with pointed bases (Goldman 1956, Nr. 1191, 1192; Slane 1987, Nr. 553) have direct NCA parallels. Fragments of spindle bottles and libation arms (Goldman 1956, 1027, also Slane 1987, Nr. 630, 631; Nr. 556, 571) point to similar, probably cult related, practices at Tarsus and centres in the Hittite core region.

Special purpose vessels include a bathtub of NCA type and known also from the earlier LBA phase. Among the imported vessels are several fragments of Grey Impressed Ware in the intermediate levels below the monumental structure (Slane 1987, 385 Nr.

522, 523, 530). Later levels yielded Red Lustrous Wheel-made libation arms (Goldman 1956, Nr. 1047, 1229), small amounts of Cypriot pottery (Slane 1987, Nr. 585, 624). two Canaanite Jars (Goldman 1956, 1215, 1216) and fragments of a possible Tell el-Ajjul crater (Slane 1987, Nr. 576, 617). Mycenaean pottery appears in the third floor level above the destruction of the main LB IIa structures (Slane 1987, 465; French 1975) but alongside LBA monochrome pottery, including NCA shapes such as plates and miniature vessels (Slane 1987, 461-465), and newly emerging local painted traditions (Ünlü 2005).

Neighbouring sites in Region F include Yumuktepe-Mersin (Garstang 1953; Sevin and Köroğlu 2004), Soli Höyük (Yağcı 2001, 2003), Sirkeli Höyük (Ehringhaus 1997, 1999) and Kinet Höyük (Gates 2001, 2006). The published LBA repertoire of Mersin shows connections to the NCA plateau via bowls with inverted rims (I 3.) (Garstang 1953, Fig. 157; Sevin and Köroğlu 2004, 78 Fig. 4.9, Fig. 5.1-2, 5-6), alongside generic carinated bowls (Garstang 1953, Fig. 157) and bowls with everted rims (Garstang 1953, Fig. 157; Sevin and Köroğlu 2004 Fig. 4.8). Shallow bowls with straight rims or plates with very weakly pronounced steps (Garstang 1953, Fig. 157; Sevin and Köroğlu 2004, 78 Fig. 4.1-5) as well as a miniature bowl (Garstang 1953, Fig. 157) are also indicators of NCA affiliations (see also Parzinger and Sanz 1992, 96). At Kinet Höyük, shallow bowls with inturned or thickened rims (I 3. and I 4.2.) are well represented in the local repertoire and frequently carry pre-firing potmarks (Gates 2001, Fig. 2.1,7,8; Fig. 3.3; Fig. 5. 2-5; Fig. 8.1-13). Also present are miniature bowls (Gates 2001, Fig. 3.11 and 12). The remainder of deep bowls and jars, however, seemingly share fewer unequivocal characteristics of NCA types.

4.4.3.6. Region G2

4.4.3.6.1. Korucutepe

The mound of Korucutepe is situated about 30 km east of the modern town of Elâzığ in the Altınova plain. The initial rescue excavations at the site (ca. 2.8 ha) took place between 1968 and 1979 (Van Loon 1978) in the wake of the Keban Dam constructions. A Turkish team later re-investigated the LBA levels between 1973 and 1975 prior to the flooding of the area (Ertem 1974, 1988; Umurtak 1996).

The excavations of the LBA Phases I and J, while sampling a range of locales across the mound, are often inconclusive in terms of the nature of the excavated contexts and their position in the larger picture of LBA I and II occupation at the site. The recovered architectural remains appear to be principally domestic in character, although there exists some disagreement as to the date of the fortification wall originally assigned to the final MBA (Van Loon 1980, Plans 56 and 58; Bier 1978; see Burney 1980 and Ertem 1974 for a Phase J date of the fortification wall).

The Phase I (Map 26) settlement is characterised by "tightly packed houses and streets" (van Loon 1980, 275), with some variations in house-sizes across the mound (Griffin cf. van Loon 1978, 275-276) (Map 27). Terracing activities that began in Phase I continued on a larger scale in the following Phase J (Map 28). In addition to domestic structures, the so-called "Massive Architectural Stage" yielded a brick platform and corbelled passage as well as the foundations of substantial walls for a tower or gate in area H-I 19 (Map 29) from which masonry blocks had fallen onto the platform (Van Loon 1978, 34-35). Following the "Massive Architectural Stage", the "Flimsy Architectural Stage" saw the construction of a small house on top of the brick platform as well as the downscaling of other houses. These appear again to have been replaced by more substantial stone architecture in the following "Orthostat Stage". The

architectural levels were then superseded by two pit horizons (Van Loon 1978, 38-40; 1980 276) from which a large part of the published pottery derives together with glyptic evidence and other small finds (see Chapter 6).

The pottery considered here comes from the final publication of the first set of excavations by Griffin (1980). The final ceramic publication of Korucutepe (Griffin 1980) utilises a simple numerical approach. It is exemplary in that all recovered sherds were recorded and a standardised shape classification was devised (Griffin 1980, 3-7; Pl. 4-6). Also, the pottery from each phase is discussed in detail and find-locations are mentioned. Rim-sherd counts and percentages of ware frequencies, although from a statistical perspective not representative of absolute vessel frequencies (Orton, Tyres and Vince 1993, 166-181), present a welcome relative measure of shape popularity at the site.

Phase I

The first half of the LBA sequence at Korucutepe is characterised by a gradual shift in ware types from grey and brown gritty to orange (buff) and red slipped or burnished wares. In Phase I, orange wares of various coarseness and fabric treatment make up about 70% of the assemblage. The following Phase J is characterised by an increase of the orange wheel-marked variety and a decrease in surface treatments, which Griffin (1980, 76) compared to the "drab ware" of Tarsus and other sites. Orange ware as a fabric type, however, was already used in Phases G and H on jugs and a variety of bowl types (Griffin 1980, 65).

In terms of formal characteristics, about half of the 1652 ceramic vessels included in the database show typological affinities with the NCA tradition (Figure 23 and Figure 24). The most concrete connection are plates with stepped rim profiles that appear in Phase I with two predecessors in the final destruction level of Phase H (Figure 36).

Altogether 89 rim pieces of two different plate types were found in association with several house structures and domestic installations such as a hearth in J 11 across the site. They were made of a diversity of fabrics including one example of Brown Gritty Burnished, two cooking as well as orange slipped, burnished and wheel-marked wares.

Among the Korucutepe bowl shapes with NCA affinities the closest links can be established with large shallow bowls (or platters) with simple straight rims (I 1.1.; 38 pieces) or with external rim thickening (I 4.1.; 19 pieces) which are hallmarks of the following Phase J where they replace NCA-style plates. This development strongly mirrors that of the NCA sequence.

The most popular shape of Phase I, accounting for more than 30% of bowl fragments, are bowls with inverted rims. The majority of these shares similarities with the type I 3. of the NCA repertoire. Bowls with everted rims (I 5.) account for about 10% of bowl shapes in Phase I. The remainder consists of large numbers of simple carinated bowls (I 1.3.) and bowls with s-shaped profiles (I 4.3.-5.). Remarkable in comparison with, Tarsus LB I for instance, is the almost complete absence of bowls and basins with strong carinations and everted rims (I 8.) and the small number of fine, hemispherical bowls with simple rims (I 1.2.). Two miniature bowls were found among the southern houses of excavation area O23.

Large vessels such as jars and pithoi are of a more distinct stylistic tradition. Jar types with NCA affinities have either straight or funnel-shaped necks with horizontal or drooping rims such as Korucutepe Nr. 113, 140, 261, 264, and possibly also 128 (Griffin 1980, Plate 4). Smaller jars with simple rims and funnel-necks (Korucutepe Nr. 395) as well as jars with inverting upper bodies and vertical or everted rims (Korucutepe Nr. 350) may also find general parallels in the Boğazköy-Hattusa repertoire (A 1. and A 2.1). Among the pithoi, only Korucutepe Nr. 330 may be

compared to type C 2.7. A special purpose vessel of NCA type is a bathtub found in the corner of a courtyard in the domestic quarter of U12-13 (Van Loon 1978, 33).

A relatively large number of rim fragments from closed vessels are comparable to NCA bottle shapes, in particular E 2.8., of which 39 pieces were found in Phase I. Many of these derive from domestic units arranged along a street on the north-west slopes of the mound (U 13).

Unlike LB I Tarsus, contemporary levels at Korucutepe display clear connections to the NCA ceramic tradition, most convincingly in the form of plates with stepped profiles as well as through their succession by shallow bowls or platters in the subsequent phase.

Phase J – Architectural Stages

In the first three levels of Phase J the mound underwent substantial terracing and the construction and re-building of house structures, some of which were more substantial than in the previous period. There was apparently no violent end to Phase I and its ceramic tradition was continued in the subsequent levels. The main difference from the previous phase is a dramatic increase in the production of pottery in orange wheel-marked wares, making up around 60% of the published ceramic evidence.

Another difference is a reduction in the number of NCA plates in the first levels of Phase J (Figure 23 and Figure 24). Only one instance is reported from the so-called "Massive Architectural Stage" in area K12. The remainder of plates was found in the level called "Orthostat Stage" in association with a stone-built house in S18, which also contained an architectural model (KRC 70-384), miniature string-cut bowls and an iron bar (KRC 70-332) (Van Loon 1978, 37).

The most abundant feature with NCA counterparts are shallow bowls with simple (159 pieces) and thickened rims (107 pieces), which clearly replace plates in the Korucutepe repertoire (Figure 36). The majority of shallow bowls come from the stone house in S 18 (77 pieces), followed by domestic structures in H 17-18 (51 pieces) and I 18-19 (22 pieces), smaller numbers of bowl rims of this type also came from K 12 and O19. Less significant than in Phase I but still well represented are bowls with inverted (I 3.) as well as everted rim profiles (I 5.), many of which were also recorded in S 18. A smaller proportion of bowl shapes belong to simple carinated (I 1.3.) and s-shaped (I 4.3.-5.) vessels.

Small concentrations of miniature bowls were found on a court surface in O 22, where one bowl was filled with borage seeds that could have been uses as condiment (Van Loon 1978, 38), and in the stone house in H-I 19. A miniature jug came from a trial trench to the north of the actual mound.

Fewer jar rims could be associated with NCA shapes from the three architectural levels of Phase J, the generic shapes, however, have not changed from the previous phase. The standard cooking pot shapes at Korucutepe Phase J share strong generic similarities with NCA types. The number of recorded closed vessels in Phase J contexts is lower than in Phase I and the only formal type of this category, as in the earlier level, is the bottle rim of Korucutepe Nr. 401.

Phase J – Pit Stages

Following the so-called "Orthostat stage" of occupation, the excavated areas of the mound went through two stages of extensive pitting. The closest links to the NCA plateau from this phase are eight plates with stepped rim profiles from pits A and G in area O20 and large numbers (128) of shallow bowls with slightly thickened rims (I 4.1.) made of the Orange wheel-marked ware. Also prominently represented are bowls with

inverted (I 3.) and everted rims (I 5.) alongside simple hemispherical (I 1.2.) and carinated types (I 1.3.). Six miniature bowls were found in various pit contexts in O 20 and 21.

Among the closed vessels, the same bottle rim-type, Korucutepe Nr. 401, possibly also Nr. 397, share similarities with NCA types. Imported vessels found in Phase J pit contexts include a spindle bottle (Griffin 1980, 16D, 17C) and the base of a libation arm (Griffin 1980, H 10; Plate 18B may be the base of another libation arm). Unlike at other sites, pre-firing potmarks are most prominent at Korucutepe in the earlier LBA Phase I.

To sum up, pottery from LBA levels at Korucutepe shares a number of clear characteristics with the ceramic tradition of the NCA plateau in terms of formal traits as well as the development of the repertoire as a whole (Table 25). The most clear-cut evidence for direct influence are plates with stepped rim-profiles, which appear in Phase I and continue, albeit in smaller numbers, throughout Phase J. Shallow bowls with straight or slightly sinuous profiles or thickened rims undergo a reverse proportional development, thus mirroring the Boğazköy-Hattusa sequence (Parzinger and Sanz 1992, Abb. 35; Müller-Karpe 1988, 161-162). Bowls with inverted rims (I 3.) as well as everted profiles (I 5) are also present in the Korucutepe repertoire, but unlike plates and shallow bowls, they do not, at least from the published evidence, seem to undergo the proportional changes known from the Hittite capital. Other vessel types such as jars, pithoi and closed vessels show substantially fewer similarities to NCA traditions.

4.4.3.6.2. Norşuntepe

The site of Norşuntepe is located ca. 25 km east of the town of Elâzığ and is the largest mound in the Altınova district, measuring about 8 ha (total settled area around 12 ha)

(Korbel 1985, 12). It lies at a 5 km distance from other prominent LBA sites such as Korucutepe and Tepecik.

The LBA occupation levels on the mound summit of Norşuntepe (Map 30) were excavated between 1968 and 1974. It is estimated that most of the LBA settlement on the central mound was uncovered. Test trenches on the southern and eastern terraces also revealed LBA occupation (Korbel 1985, 14, 47). The LBA settlements (Horizons IV and III) overlie in a terraced fashion, and often immediately, the burnt mud-brick structures of the EBA "palace" (Horizon V). MBA occupation levels are restricted to pit fills and layers of grey soil between the EBA and LBA except for a restricted area in the eastern part of the mound. Strong continuity between the LBA and the EIA made the definition of a transition between the two periods difficult with the exception of the EIA hand-made grooved pottery (Korbel 1995, 15).

Three completely excavated houses, arranged around an open space, in addition to several partially exposed structures, occupied the central part of the mound during the LBA (Map 31). While a general continuity characterises the architectural layout of Norşuntepe during the two LBA phases (Horizons IV and III), several new structures, additions to existing buildings and changes were observed in Horizon III (Korbel 1985, 47; 123). The structures from the central area of the mound were well built and relatively large (*Gehöfte*) but apparently of mostly domestic character. Among the small finds from this level are a Mitanni-style cylinder seal, NCA biconvex seals (Wälfler 1974; see Chapter 6) and perhaps also a silo structure (Hauptman 1972, 107-108).

The LBA ceramic evidence from Norşuntepe has been extensively published by Korbel (1985). The catalogue includes 2488 rim and base fragments out of 5000 recovered diagnostic pieces, along with their contextual information (Korbel 1985, 125). The data were recorded in standardised categories for shape and a series of technical details

such as fabric, temper, firing and surface treatment. Pottery from three architecturally defined phases was examined by Korbel (1985) in an attempt to trace chronological developments of both "techno-" and "form-types" using basic statistical tools. From his analysis, Korbel (1985, 92) concluded that it was impossible to trace a formal-typological development in the LBA corpus. He further highlighted the strong degree of formal variation in individual shape categories:

> *Denn die Vielzahl der Varianten bezeugt ja gerade, daß sowohl Anbieter als auch Verbraucher allgemein eine große Variationsbreite der Form akzeptierten, so daß ein formaler Wandel bei den Gefäßen auch gar nicht zu erwarten ist.*
> (Korbel 1985, 92)

A gradual change to softer forms and less pronounced rim profiles is proposed as a possible formal development (Korbel 1985, 92), which would be different to NCA trends.

Pit contexts from underneath the first LBA I building phase (Horizon IV) already contained pottery typical of the LBA, while rim profiles from other MBA contexts show marked differences to later shapes. Korbel (1985, 92), thus, proposed a side-by-side existence of two pottery traditions, which cross-fertilised each other. Important for the present investigation is the fact that LBA pottery from Norşuntepe has its roots in preceding levels and does not present an abrupt introduction at the time of the Hittite empire.

A re-investigation of the Norşuntepe pottery from Korbel's extensive catalogue, unfortunately encounters a number of problems due to the focus on "techno-types" on the one hand, which makes comparisons with other sites difficult and has encountered scepticism in the past (Müller-Karpe 1988, 2). On the other hand, the nature of the pottery catalogue makes it difficult to follow up stratigraphic subdivisions. The following overview of the ceramic evidence, thus, treats the entire published corpus as one

analytical entity. Finer chronological changes are lost in this process and only a general, binary investigation of presence/absence of NCA-style pottery at Norşuntepe is provided here.

In terms of fabric groups, Korbel (1985, 114) observed a dramatic reduction of grey wheel-made ware in some Horizon IV excavation areas, while other contexts of the same level contained higher proportions of this metallic MBA ware type. Unlike Korucutepe, whose Phase I saw an increase in high quality orange and red smoothed wares, the Norşuntepe corpus is reported to have produced a lower quality orange ware (Korbel 1985, 115), closer to the orange wheel-marked ware of Korucutepe Phase J.

The formal spectrum of the LBA ceramic from Norşuntepe shows some, but not overwhelming, connections with the NCA plateau (Figure 25 and Figure 26). Plates with squared rims were found in very small numbers at Norşuntepe (Figure 37). A total of six vessels are illustrated in the ceramic catalogue (Korbel 1985, Nr. 1596, 2139, 2197, 2624, 2639, 4185 and a slightly different form 2315). Shallow bowls with straight profiles (I 1.1.) or thickened rims (I 4.1. or I 4.2.) are better represented, but still only account for ca. 11% of bowl shapes. Bowls with inverted rims (I 3.) make up around 9% of the published bowl repertoire, while types with everted rims (I 5.) account for ca. 6%. Strongly represented are carinated bowls with everted rims (I 8.) with 20%, while simple bowls with tapered rims (I 1.2.) and carinations (I 3.) make up around 4% of the repertoire each. All of these types have predecessors in the pit level underneath the fist LBA building phase. On the basis of this ceramic evidence Korbel (1985, 120) proposed a date of Norşuntepe Horizons IV-III in the LBA II contemporary with Tarsus LB IIa.

Miniature vessels in the form of a handle-less jug (Korbel 1985, Nr. 5812) and bowls (Korbel 1985, Nr. 4981, 4982) present a further link to the central Anatolian ceramic tradition. Another feature with parallels on the central plateau are cylindrical cups with high handles (Fischer 1963, Tafel 82 e.g. Nr. 679); Korbel 1985, 119; Murray 1986, 274).

The majority of jar and pithos forms at Norşuntepe do not share many obvious links to the NCA plateau, however individual rim pieces can be identified among small jars with rounded bodies (A 2.), jars with funnel-necks and horizontal or drooping rims (A 4.) as well as carinated jars with vertical upper bodies and everted rims (A 3.). Similarly cooking pots with simple or internally thickened as well as everted rims share generic similarities with the Boğazköy-Hattusa material. The same applies to jars with constricted necks, jugs and bottles, of which particularly large bottles or amphorae show connections with the central plateau.

In summary (Table 25), I agree with Murray's (1986, 274) assessment that, contrary to the excavator's portrayal in the preliminary excavation reports (e.g. Hauptmann 1970, 119-120; 1971, 34-35; 1972, 107-108), the connections of Norşuntepe with the pottery tradition of the NCA plateau are limited to very few NCA-style plates, miniature vessels and shallow bowls as well as a general preference for wheel-made and low-investment production. One important difference between the NCA fabric tradition and the plain wares of Norşuntepe are the latter's frequent organic tempering (Korbel 1985, catalogue; Murray 1986, 275).

Other LBA sites in the region include the nearby site of Tepecik as well as İmikusağı and Arslantepe near Malatya. Very little ceramic material has been published so far from Tepecik. Esin identified shallow bowls, deep carinated bowls and a number of jars and bottles with NCA links (Esin 1970, Tafel 8.2 and Tafel 9; 1971, 123-124 Tafel 92.1;

1974, Tafel 101.2, 4). A large number of painted jars alongside other vessel forms, including plates and bowl shapes with associations to the NCA ceramic tradition, were found at İmikusağı in connection with monumental architecture (Konyar 2002; 2006).

At Arslantepe-Malatya a massive gateway and part of a LBA fortification wall were excavated in Level IV (Pecorella 1975; Müller-Karpe 1988; Parzinger and Sanz 1992, 94-95 for comparisons with the Boğazköy-Hattusa material). The pottery of this site too shares some formal characteristics with the NCA plateau, including shallow bowls (I 1.1., I 4.1.-2.), bowls with inverted (I 3.) and everted rims (I 5.) (Pecorella 1975, Fig. 22.1, 2, 11, 12, 17, 18) as well as more generic s-shaped and carinated bowls. Jars with funnel-shaped necks and horizontal or drooping lips (A 4.) are also present in the Arslantepe IV repertoire (Pecorella 1975, Fig.26.4, 8, 9, 10, 12), alongside two familiar pithos shapes (Pecorella 1975, Fig.27.1 and 5). Cooking pots with simple strengthened and everted rims (Pecorella 1975, Fig.24.1 and 2.) as well as closed vessel forms (Pecorella 1975, Fig.20.3; Fig. 23.14) provide further formal links with the central plateau. As at other sites in Region G2, pottery with NCA affinities accounts for only part of the local repertoire. The Arslantepe material differs from Korucutepe and Norşuntepe through the apparent absence of NCA-style plates. As is the case with other sites in the region, pottery with NCA connections continues to be produced into the first stages of the EIA.

4.4.3.7. Region H

4.4.3.7.1. Tille Höyük

The 0.8 ha fortified site of Tille Höyük is situated on the west bank of the Euphrates on a natural crossing point near the modern bridge of the Adıyaman-Urfa road in Adıyaman province (Summers 1993, 2). Tille Höyük is the only known site with evidence for LBA occupation within the catchment of the Atatürk Barrage (Summers 1993, 4) with the nearest excavated LBA II settlement at Lidar Höyük located about 70

km downstream (Hauptman 1987, 204-205). Tille Höyük was excavated between 1978 and 1990 as part of rescue operations during the construction of the Atatürk (Karababa) Barrage and the primary research objective of the project was the establishment of a stratigraphic sequence for the site.

The transitional LBA – EIA layer, the so-called "Burnt Level", was exposed in deep soundings (Map 32) along the west side of the mound and in one 10-metre square on the north side (Summers 1993, 3). Occupation levels below the Burnt Level were excavated over an area of ca. 15 x 10 m. The beginning of the LBA and the MBA could not be defined (Summers 1993, 4). Altogether 11 occupation levels, separated by fills, were identified below the Burnt Level. The kind and density of architecture in the LBA levels of Tille Höyük varies substantially over time, but due to limited exposures little more than generalised context characterisations were possible. Most structures appear to have had domestic functions (Summers 1993, 24 – 39) apart from the gateway, casemate wall and associated magazines in the last three LBA levels (Map 33 to Map 36). Two biconvex seals with Luwian hieroglyphic inscriptions (Collon 1993, Fig. 74.5 and 74.6) point towards administrative links between Tille and the Hittite authorities (see Chapter 6). Summers (1993, 55-56) proposed that the apparent coincidental appearance of heavy defensive architecture at Tille Höyük and, what he termed, "drab ware" platters are to be associated with Hittite authority in the region.

Each level was recorded together with its repertoire of *in situ* pottery and other objects found on or set into floor levels and floor scatters. The majority of sherds, however, was discarded after investigation and only a sample retained together with the *in situ* vessels for future study (Moore 1993, 9-18; Summers 1993, 3). Thus, the ceramic catalogue concentrates on whole or restorable *in situ* finds and includes sherds of otherwise unrepresented types.

Level 1-5

Tille Höyük Levels 1-5 were dated from around 1400 to the first quarter of the 13th century BC by the excavators (Summers 1993, 30). The ceramic repertoire of these levels is very different to the NCA tradition (Figure 27 and Figure 28), featuring jars with combed decoration, painted jars and bowls as well as local lug-handled cooking pots. Combed Ware at Tille Höyük, in contrast to LBA I wheel-made combed ware from sites such as Tell Hadidi (Dornemann 1981, 31-33), was handmade and organically tempered (Summers 1993, 43). Tille Höyük also appears to have been the only site in the Adıyaman survey area with this type of pottery. A Mycenaean IIIA/B stirrup jar came from a fill between Levels 3-4.

Among the few parallels with the NCA tradition in these levels are two shallow bowls (I 1.1.), which are wheel-made and of the simple buff ware (Figure 38). One of the bowls has two painted strips on the upper body and both come from fill levels. General similarities exist between a variety of s-shaped bowls (I 4.3.-5.), which are, however, often too sharply carinated for NCA standards, and bowls with everted rims and carinated bodies. The majority of bowls from these levels, however, are hand-made and vegetal temper is used alongside inorganic materials. A number of jar rims with constricted necks, some of which have painted decoration, share very general similarities with standard NCA shapes.

Level 6-8

Only a very small number of vessels was published from Levels 6-8. All eight vessels are wheel-made and formal similarities between the NCA tradition consist of a shallow bowl, made from so-called "drab ware", as well as a possible jar and jug rim (Figure 27, Figure 28 and Figure 38).

Level 9-11

Equally few vessels were published from Levels 9-11, which included a domestic context and a gate structure dated from the final years of the 12th century to early 11th (Summers 1993, 30). NCA parallels can be found for two shallow bowls or platters (I 4.2.), which are both made from the local, vegetal and grit tempered "drab ware". A further carinated bowl with everted rim could be compared to bowl shape I 8. (Figure 27, Figure 28 and Figure 38).

Pre-Burnt Level

A small number of vessels were published from mostly fills from underneath the final destruction horizon (Figure 27, Figure 28 and Figure 38). The most striking feature are eight bowls with formal links to NCA shapes (I 1.1., I 3., I 4.1.-2.), made of the local "drab ware". A smaller shallow bowl, also in "drab ware", may be compared to miniature vessels from the central plateau (Müller-Karpe 1988, N2). One of three jars shows generic similarities with small NCA jars with everted rims (A 2.2.), the others, all made from "drab ware", have less clear parallels.

Burnt Level

The final destruction layer of Tille Höyük has yielded a dendrochronology date around 1100 BC, suggesting that occupation continued at the site for longer than at LBA Anatolian and northern Syrian sites (Summers 1993, 55-56). The main difference from the previous level is the absence of complete shallow bowls or platters (Summers 1993, 48) (Figure 27, Figure 28 and Figure 38). Two deep bowls with thickened and everted rims can be compared to NCA shapes (I 5. and I 6.). As in previous levels, a number of jar rims, cooking pots and closed vessel profiles shares generic similarities with the NCA tradition, while at least as many types do not show such connections.

Müller (2003, 137-138) recently proposed that the burnt layer of Tille Höyük

> ...contained pottery material that is comparable beyond doubt to what we usually call Hittite pottery. There are large numbers of shallow plates and platters, jugs and bottles and the standard cooking pot types, all of them wheel made.

My analysis of the LBA Tille Höyük material from the publication by Summers (1993; as opposed to Müller's source Blaylock 1998), found that the site's associations with the NCA plateau are less overwhelming (Table 25). They are effectively restricted to the introduction and deterioration in the quality of wheel-made pottery as well as shallow bowls or platters. These shapes, however, are extremely generic and examples can be found in the contemporary northern Syrian and Mesopotamian repertoires, especially when considered in connection with the organic temper used in Tille Höyük "drab ware" that differs fundamentally from NCA practices (see below).

4.5. Results of The Ceramic Analysis

The primary aim of the above analysis was to assess the degree of homogeneity and difference in the ceramic repertories of sites geographically peripheral to the cultural and political core region of the Hittite empire. It has demonstrated conclusively that the distribution pattern of NCA formal types and the chronology of this distribution is more complex than a straightforward imposition of a standardised imperial service as part of Hittite economic or political-administrative strategies. As summarised in Table 26 and Figure 29, some sites appear to have been engaged more closely in the NCA ceramic phenomenon, while at least one does not seem to have been influenced by it at all.

One of the strongest indicators of LBA NCA ceramic influence are plates with stepped rim profiles. They appear in varying quantities at six of the sites investigated. While apparently numerous at Porsuk and Korucutepe, more moderate numbers originate from Gordion and Tarsus, and only a handful of examples are reported from Beycesultan and Norşuntepe. Aphrodisias and Tille Höyük do not feature NCA plates in

their LBA repertoire. At all six sites, plates are introduced sometime during the LBA and at some they continue into the EIA. As far as tentative chronologies and synchronisms allow, the timeframe of the appearance of such plates at the different sites, however, is not identical. Nor is their pattern of continuity and discontinuity during the second part of the LBA. The earliest appearance of plates is reported from Korucutepe Phase I (ca. 1600 and 1400 BC), where they constitute a type-fossil for the LBA I (Griffin 1980, 71-72). In the following Phase J, this pottery type decreased quite dramatically in favour of shallow bowls or platters. At Gordion and Tarsus, plates with stepped profiles were found for the first time in LBA II levels, which seems also to be the case at Norşuntepe and Beycesultan. Plates are also present in the repertoires of Mersin in Region F, while Kilise Tepe (Region E), Kinet Höyük (Region F) and Arslantepe (Region G2) seemingly lack this distinctive feature.

During the last phase of the LBA, plates were increasingly replaced by shallow bowls in NCA repertoires. These were found at six of the eight sites where they were made of a fabric described as "drab ware" in reference to NCA developments and carelessly thrown on the fast wheel. They are missing from Aphrodisias and Porsuk. The examples from Beycesultan too show a strong degree of divergence from the NCA theme but are difficult to judge from line drawings.

Shallow bowls or platters were found in large quantities at Korucutepe in Phase J but they were already present in the preceding Phase I. The same appears to be the case at Tarsus, where shallow bowls/platters outnumbered plates. At Gordion, shallow bowls appeared at the same time as plates in the LBA II. As at Tarsus, the former type is also more numerous than plates at Noşuntepe, where they account for ca. 11% of the bowl assemblage. With the exception of one example from the earliest LBA levels at Tille Höyük, shallow bowls concentrate in the last LBA occupation levels. They are also

present at Kilise Tepe (Region E), Kinet Höyük (Region F) and Arslantepe (Region G2).

Bowls with inverted or internally profiled rims (I 3.) are features most characteristic of the early and middle stages of the LBA sequence at Boğazköy-Hattusa. With the exception of Aphrodisias, bowls of this type are known from all sites examined here, albeit in varying quantities and with numerous variations on the NCA theme. Only few examples are published from Tille Höyük. Predecessors are known from MBA or MBA-LBA transitional levels from Gordion and Korucutepe. At Korucutepe the shape concentrates in Phase I but is also strongly represented in Phase J, while it is most prominent in the later phases at Beycesultan and Tarsus. Bowls of this type were also found at Kilise Tepe (Region E), Kinet Höyük (Region F), and Arslantepe (Region G2).

Everted rim bowls (I 5.) define the last phase of the LBA at Boğazköy-Hattusa. This shape is absent at Porsuk, Aphrodisias and Tille Höyük. Five examples from Tarsus were published by Korbel (1987), but it is not possible to determine their chronological context. At Gordion, Beycesultan and Korucutepe, bowls of this type have come from all LBA (and EIA) contexts. While they concentrate in the LBA II phase at Gordion, the largest number of examples was recorded in Phase I at Korucutepe. At Norşuntepe too bowls with everted rims are strongly represented, while they are less frequent at Kilise Tepe (Region E) and Kinet Höyük (Region F).

Other bowl shapes in the Boğazköy-Hattusa repertoire are either too generic or chronologically insensitive to allow more than the constitution of similarity; they were however included in Figure 29 to provide an overall impression of the likeness of assemblages.

Another typical feature of the ceramic assemblage at Boğazköy-Hattusa particularly in the second part of the LBA are miniature vessels either in the shape of bowls or juglets. Miniature bowls are found at six of the eight sites, with Aphrodisias and Porsuk forming again the exceptions. Single occurrences of such bowls are reported from Gordion, Beycesultan and Tille Höyük. A total of 17 miniature bowls from Tarsus were published by Goldman (1956) and Korbel (1987), which display a variety of shapes but within the NCA spectrum. Around 20 examples are published from Korucutepe and two from Norşuntepe. Except for Korucutepe, where miniature bowls appear in Phase I (LBA I), they concentrate in the LBA II at all other sites. More distinctive are miniature juglets, of which one example was found at Korucutepe Phase J and Norşuntepe respectively, while altogether 13 are published from Tarsus (Goldman 1956; Korbel 1987).

Other vessel types such as jars, cooking pots and closed vessels are not as well suited to trace the direction of LBA ceramic connections for the same reasons as generic bowl types. At all the sites in question, a small number of jars with NCA affinities, mostly vessels with funnel-shaped necks and everted rims, could be identified. The same applies to cooking pots, particularly at Porsuk, Korucutepe and Norşuntepe. Very different cooking vessels were found at Tarsus, where they are hand-made, Aphrodisias, Beycesultan and Tille Höyük. A small number of closed vessels, mostly in the shape of tall bottles with external rim-profiles have come from all sites investigated.

Another measure of ceramic relations between peripheral sites and the capital city is the proportion of shapes unrelated to the NCA tradition in individual assemblages and in the specific case of bowl types which are summarised in the "different" category in Figure 29 and Figure 30. As noted in the beginning of this chapter, these graphs serve the purpose of visual representation. They do not compare statistically viable proportions, as the number of vessels published from each site varies dramatically. Rather, the proportions of vessel and bowl types portrayed are calculated out of each

published assemblage. Despite these limitations, some overall patterns can, nevertheless, be appreciated from these graphs. They also permit the division of the sample sites into four groups, whose cultural connections with NCA centres differ in kind and degree, suggestive of a set of distinct cultural and economic behaviours, only some of which may be a direct result of imperial strategies.

4.5.1. Group 1: NCA Cultural Sphere

Not unsurprising is the decline of overall ceramic similarities with distance from the core region of the Hittite state. Porsuk and Gordion, the two sites closest to the Hittite core region display the highest degree of formal as well as technological resemblance. The assemblage of Porsuk on the southern fringe of Region A3 shows the closest overall connections with the LBA tradition of Boğazköy-Hattusa that include not only signature shapes such as plates and inverted rim bowls but also jars, cooking pots and closed vessels. To date, the pottery of only the later of two LBA levels has been published and it is therefore not possible to judge the degree of continuity or abruptness of the introduction of this ceramic style. From the available evidence, however, it would seem that Porsuk formed an integral part of the NCA cultural tradition. This picture fits well with survey evidence from the south-western part of Region A3, where the Konya Plain Survey found strong ceramic connections with the northern half of the plateau but also constituted a MBA origin of these affinities (Baird 2002, 19) (Chapter 5).

The massive fortification wall surrounding the LBA settlement at Porsuk testifies to its strategic importance in the control of movement through the Cilician Gates as well as over nearby mineral resources. While the material culture evidence from Porsuk cannot, strictly speaking, confirm political links, it seems a strong likelihood in this case. The presence of a diverse spectrum of NCA pottery types may be seen as an indication of its inhabitants' strong links to NCA sites. It seems also unlikely that a

heavily fortified site unaffiliated with the Hittite authority would have remained unchallenged at such a strategic place.

There are, however, also significant lacunae in the Porsuk repertoire, mainly in the form of chronological indicators of the last phase of NCA ceramic development such as shallow and everted rim bowls and miniature vessels. This absence of chronologically later forms may indicate that the site was destroyed prior to the final abandonment of Boğazköy-Hattusa or, alternatively, did not follow the final ceramic development at the capital. In the light of recent dendrochronological work, the former scenario appears more likely (Mielke 2006c).

Almost equally close are the overall formal associations of Gordion with the NCA ceramic tradition. These connections, however, can be traced over a longer period, stretching back to at least the MBA-LBA transitional phase in the form of, for instance, red-slipped and burnished bowls with handles and beak-spouted jugs (Gunter 1991, 47-48). During the LBA, Gordion displays the whole range of typical NCA features from plates and inverted rim bowls to shallow and everted types as well as miniature vessels. Also included in the repertoire are a variety of chronologically less sensitive bowl shapes, jars and cooking pot types as well as closed vessels. Gordion seemingly formed an integral part of the NCA cultural tradition prior to the establishment of the Hittite empire, but connections broadened further during this phase. As will be discussed in Chapter 6, the use of *"signe royal"* stamps on pottery and evidence for LBA NCA glyptic practices further underline these connections.

4.5.2. Group 2: Strong but Restricted Similarities

Another site whose overall assemblage seemingly matches those of Porsuk and Gordion in its close connections to the NCA tradition, is Korucutepe Phase J. Figure 29 and Figure 30, however, indicate that the scope of these similarities is more restricted

than at the above sites and is carried mostly by the large number of shallow bowls found in Phase J contexts. Bowls with inverted rims (I 3.), miniature vessels and a smaller number of jar rims present additional but less striking connection to the north-central plateau in this period. From the point of view of chronology, Korucutepe appears to present a special case in eastern Turkey in that cultural influence from the plateau is already strong in the first half of the LBA (Phase I). NCA plates but also large numbers of shallow bowls typical of Phase J are already present in LBA I contexts. At the same time, other vessel types show limited connections except for a relatively large number of cooking pots in the pit horizons of Phase J.

Thus, although NCA ceramic influences are clearly evident at Korucutepe, they are restricted to a relatively small number of distinctive forms and their apparent introduction in the first half of the LBA predates the historically attested establishment of the Hittite empire proper in the early 14th century BC and the lasting incorporation of east Anatolian polities. Prior to this, Hittite historical sources report military conflict and political agreements between the Hittite kings and local communities in the Middle Hittite Period (Chapter 3). During the LBA I, Isuwa, alongside various neighbouring polities, was chiefly part of the Mitanni realm. Firmer connections between this region and the Hittite imperial entity were established during the LBA II according to the textual sources. Material culture evidence for administrative connections to NCA derives from Phase J pit and domestic contexts (Chapter 3 and 6).

4.5.3. Group 3: NCA Influence in Local Traditions

Group 3 includes the sites of Tarsus and Norşuntepe, whose ceramic repertories show a number of similarities with the NCA plateau while displaying equally strong local characteristics. Beginning with Tarsus, a clear increase in vessel types with NCA affinities is evident between Levels LB I and LB IIa. This transformation includes a change in dominant ware types towards coarser fabrics and plain surfaces. NCA-style

vessels in Level LB I are restricted mainly to carinated bowl categories, whose origins on the central plateau reach back into the MBA phase and, therefore, cannot be considered as related to Hittite political expansion. The same applies to high quality vessels such as beak spouted jars and special purpose implements from funnels and strainers to a bathtub. One bowl with inverted rim (I 3.) and two with slightly s-shaped walls and thickened rims (I 4.2.) are among the few LBA NCA types found in the Tarsus LB I repertoire. In the following LB II phases, new introductions include NCA plates and shallow bowls, larger numbers of bowls with inverted rims (I 3.) and deep bowls with strengthened rims (I 6.). Miniatures and a smaller number of jars and closed vessels further add to the picture of NCA influence at Tarsus in the second half of the LBA. NCA affinities account for about half of the Tarsus repertoire represented in published form. Another difference from Korucutepe is the relative diversity of shapes with links to the NCA plateau and the numerous connections to older MBA types. Related to this last point are chronological differences between Tarsus and Korucutepe in the pace of the uptake of NCA cultural influences. While LBA NCA types are hall-marks of the LBA I phase at Korucutepe, they appear to take root at Tarsus, with few exceptions, only in the LBA II.

Around 50% of pottery from LBA Norşuntepe shows similarities to NCA assemblages. This is mostly carried by a variety of bowl types. Figure 26 indicates that the entire spectrum of NCA bowl shapes is represented at Norşuntepe, but strong formal variation in individual pieces (also Korbel 1985, 92) makes it difficult to categorise vessels. Also, a large proportion of these bowls are generic types for which examples exist in other LBA regional traditions. Present in the repertoire but not, apparently, to the same degree as at the neighbouring Korucutepe are the standard types of shallow bowls and bowls with inverted rims as well as a very small number of plates with stepped profiles. Jars with funnel necks as well as straight upper bodies are

represented at Norşuntepe alongside a smaller number of cooking pots and closed vessel types.

4.5.4. Group 4: On the Fringes of NCA Ceramic Influence

Fewer connections still can be detected in the repertories of Beycesultan and Tille Höyük, which lie at the western and south-eastern geographical fringes of NCA ceramic influence.

Throughout the LBA Beycesultan shares very little in common with NCA assemblages. The ceramic tradition of this site is closely connected to its MBA predecessors and similarities expressed in Figure 17 are due to generic bowl forms, which cannot be used to trace directions of NCA ceramic influence. In Levels II and I we find a small number of vessels such as plates, miniatures and bowls with inverted rims and simple shallow types, which point towards a low degree of ceramic influence from the central plateau. Besides a number of beak-spouted jars and a jar/urn with parallels in Old Hittite levels at Boğazköy-Hattusa, all other vessel categories are distinctly local in character. Despite an apparent increase in plain wares at the end of the LBA (Mellaart and Murray 1995), the pottery from Beycesultan is one of high labour-investment in the form of coloured and metallic slips and other types of decoration. The diversity of special purpose vessels is also unparalleled on the NCA plateau. Thus, although there are some NCA elements in the ceramic repertoire of Levels II and I at Beycesultan they do not represent a major cultural transformation.

The case of Tille Höyük is rather different to that of Beycesultan as a clear cultural shift seems to have taken place during the LBA. The exceedingly small numbers of vessels published for each level, however, render the relations represented in Figure 27 and Figure 28 disproportionate and any conclusions tentative and preliminary. Formal developments at the site include a shift from decorated grooved and painted pottery to

plain, wheel-made wares. Formally, the main connection with the NCA plateau are shallow bowls, in Levels 9-11 and particularly in the Pre-Burnt contexts. In the latter phase, a miniature bowl and one jar with possible NCA connections were also found. In the following Burnt level, further five jars, three cooking pots and five closed vessel profiles show similarities with NCA types. Lacking are plates with stepped profiles and signature NCA bowl types. These limited formal connections are further diluted by technological differences in the local "drab ware", which is organically tempered. To the south of Tille, NCA-style pottery has been reported from Lidar Höyük (Müller 2003; 2005), but has yet to be published in detail. No LBA pottery is available from Carchemish.

4.5.6. Group 5: Beyond Influence

The LBA settlement at Aphrodisias lies clearly beyond the limits of NCA ceramic influence. The pottery from this site shares virtually no indicative connections with the central plateau. The definitive geographical barrier of ceramic influence from the plateau thus must have lain somewhere between Beycesultan and Aphrodisias. Already at the former site such connections are few and the limits of the NCA pottery phenomenon, as indicated by field surveys (Mellaart 1995, Maps 1-4), was the plateau region, fringed in the south and south-west by the Pisidian Lake region.

In the above analysis I have established a measure of variation in the chronological, stylistic and proportional uptake of NCA-style ceramic traits in surrounding regions. The following section will discuss the other aspect of the current debate about this pottery that evolves around its alleged mass-production and related imperial involvement in its distribution (e.g. Gunter 1991, 105; 2006, 360-361; Henrickson 2002, 123; Gates 2001, 141; 2006, 308; Müller-Karpe 2002b, 257; Müller 2003, 2005; Postgate 2005; Jean 2006, 328-330).

4.6. Standardisation or Standards of Production?

With the exception of Aphrodisias, which lies outside the sphere of NCA ceramic influence, all settlements investigated in this chapter are reported to have undergone a shift from higher to lower labour investment in ceramic production. The term "drab ware" has become a standard way of referring to wheel-made pottery with little or no investment in surface treatments in peripheral areas (originally Goldman 1956, 203; Summers 1993; Gates 2001) and in the capital (e.g. Schoop 2006, 216). The transformation from higher-investment MBA and LBA I pottery to assemblages dominated by plain wheel-made pottery of generic shapes has tended to be associated with notions of standardisation as the result of mass-production. This in turn has tended to be seen as connected with Hittite political expansion and strategies of control (e.g. Garstang 1953, 141-142; Goldman 1956, 350; Burney 1980, 165; Macqueen 1986, 105; Gunter 1991, 105; 2006, 360-361; Henrickson 2002, 123; Gates 2001, 141; 2006, 308; Symington 2001; Müller-Karpe 2002b, 257; Müller 2003, 2005; Postgate 2005; Jean 2006, 328-330 for a critical perspective). In the majority of cases, however, conjectures of standardisation and mass-production as well as their causal relations to imperial strategies are untested hypotheses.

Craft specialisation and the degree of elite control over production of both "politically charged commodities" and, in this case, plain utilitarian pottery, are important aspects of the political economies of ancient states (Brumfiel and Earle 1987; Clark and Perry 1990; Costin 1991; Blackman, Stein and Vandiver 1993). However, the issues of product standardisation, craft specialisation and the circumstances of production as well as the interrelations of these subjects and their respective archaeological visibility have to be disentangled and assessed individually before we can embark on a process of interpretation. This requires the recollection of some of the definitions used in the

analysis of craft-production, its socio-economic environment and the challenging of generalisations in the description and interpretation of LBA Anatolian pottery.

The term standardisation is used in the literature for a wide variety of related, but nonetheless distinct, observations and processes that range from the description of larger amounts of plain, wheel-made and roughly similar looking pottery to the motor habits and metrically almost identical output of highly skilled, full-time potters. In general, standardisation of a particular artefact class is assumed to be indicative of specialised craft production (e.g. Rice 1981; Brumfiel and Earle 1987; Costin 1991). Ethnographic studies, however, have demonstrated that standardised products are not invariably the results of industrial-scale production environments. Similar levels of product homogeneity can also be achieved by household and specialist crafts people (Arnold 1991, London 1991 cf. Berg 2004, 76). Specialised systems of production are expected to have fewer producers, which engage in routinised sequences of manufacture through which both intentional and unintentional variation are reduced. Skill and motor habits and the use of similar tools are unconscious sources of variation or homogeneity, whereas decisions concerning raw materials, manufacturing techniques, form and decoration are actively taken by the producer (Costin 1991, 33; Costin and Hagstrum 1995; Berg 2004, 76 for a summary of ethnographic observations). Consumer demand in association with social and cultural dimensions of appropriateness and value as well as economic efficiency or specialised purpose of a vessel type have been observed ethnographically to influence ceramic standardisation (Longacre 1999; Arnold and Nieves 1992).

We should also keep in mind that modern definitions of standardisation as a purposeful process related to state authority or economic considerations need not automatically apply to past scenarios.

> The term standardisation is thus applied to a purposeful and intentional process, but we should not assume that standardisation in antiquity was also intentionally striven for or formed part of a longer-term strategy: there may be incidences where standardisation occurs as a coincidental result of other variables.
> (Berg 2004, 75)

Archaeologically, standardisation may be observed through uniform morphological properties, assemblage homogeneity as well as raw materials, forming sequences and finishing methods. The assessment of the circumstances of ceramic production and the existence and degree of standardisation in NCA-style pottery in peripheral locations is difficult due to two related factors. The first concerns the lack of excavated ceramic workshops and kilns outside the Hittite core area, which would allow statements about the nature of local craftsmanship and its relation to elite institutions to be made. The second problem pertains to the fragmentary nature of LBA pottery from excavated sites that hinders viable statistical analyses of morphological elements.

The notion of mass-production in connection with LBA Anatolian ceramic industries also requires a short re-examination in the light of archaeological and ethnographic observations that put into perspective otherwise implicit assumptions about the volumes of production necessary to achieve standardisation, the possibilities of social organisation for the manufacture of large numbers of plain utilitarian pottery, the demands of various types of consumers and the labour and time needed to respond to such demands. This applies both to the scale of pottery production at peripheral sites as well as at the capital city, where Schoop has recently stated that

> [w]e are dealing here with an industry that had, it appears, an output of *almost industrial scale*.
> (Schoop 2006, 216, my emphasis)

The standardisation hypothesis advocated mainly by Costin (1991, 2000; Costin and Hagstrum 1995), which is based on the assumption that higher uniformity is directly related to higher production rates, has received recent attention from the point of view of the relationship between motor habits/skill and standardisation of products. In order

to isolate some of the parameters involved in specialisation Roux (2003) conducted a statistical analysis of metric variability in pottery manufactured in contemporary low and high-rate production environments in India with comparisons to urban high-rate production in Spain. Several results were reached, which considered in the light of current views on LBA NCA pottery will have to lead to a re-evaluation of traditional assumptions.

On a general level, Roux's (2003, 776-7) results reconfirm a link between high-rate ceramic production and standardisation. Height, maximum diameter and aperture were identified as the elements most likely to vary in accordance to motor habits, whereas vessel lips were found to be a field of personal expression for the potter. Small-scale and low-rate production levels, exemplified by contemporary part-time village potters from rural India with an annual output of around 6,000 vessels, were found to enable the potters to develop motor habits that allow the manufacture of standardised series of vessels comparable to those from high-rate production events. The latter were observed in a Dehli suburb, where full-time potters specialised in water jars produced an annual average of 15,000 vessels each (Roux 2003, 769-770). From these observations coefficients of metric variation were calculated (below 3% in the case of high-scale production; up to 9% of variation from small-scale to very small-scale production).

Roux then applied the same analytical approach to "open-simple-rim" fine ware bowls from Tell-Leilan (Period IIb), which have been characterised previously as highly-standardised products of large-scale/mass-production of utilitarian goods (Blackman, Stein and Vandiver 1993, 73; Stein and Blackman 1993). Based on a kiln waster of 27 vessels stuck together, which may be assumed to represent a single production event, variations between 4% and 9% in vessel height and rim diameters respectively, would according to Roux (2003, 780), indicate a weakly standardised production system,

despite the specialist skills required for their production. The same type of vessels recovered from a domestic refuse context showed up to 18% of variation. These were initially interpreted as the products of non-centralised production (Blackman, Stein and Vandiver 1993), although the deposit is likely not to represent a single production event.

From the perspective of NCA style pottery vessels, which have also been claimed to be of highly standardised and mass-produced nature, several important deductions have to be made from Roux's study (2003). First and foremost, the quality of the data at hand has to be questioned in the light of the detailed and multiple measurements from each vessel and the average sample size required to conduct statistically convincing analyses of ceramic standardisation. The stacks of well-preserved "simple-open-rim" bowls from Tell Leilan illustrate this point and contrast strongly with the majority of ceramic data from LBA settlement contexts in Anatolia excavated and made available for general study so far. Hence, the clustering of vessel sizes proposed for Gordion YHSS 8-9 (Henrickson 1993, 107) has to be put in question in the absence of published information of the size and completeness of the sample investigated. More detailed investigations of ceramic standardisation in LBA Anatolian contexts could prove potentially fruitful with data from production and storage contexts at Boğazköy-Hattusa (Müller-Karpe 1988) or Kinet Höyük (Gates 2001, 139) and Kuşaklı (Müller-Karpe V. 1998, 112).

Related to the above factors is another, generally taken for granted, aspect of NCA pottery at the imperial capital but also in peripheral locations, that of high-volume ceramic output/consumption and the work-force required for it. No attempts have been made to investigate the actual scale of production at the sites in question through quantitative analyses recently demonstrated in Old and New world contexts (e.g. Blackman et al. 1993; Costin and Hagstrum 1995; Roux 2003). To depart from

traditional assumptions and typological comparison, questions have to be asked about the average consumption levels of the pottery in question by the capital, the wider state economy as well as smaller-scale peripheral settlements. The ratio between state and domestic demands on the pottery industry would have to be approximated to assess the possible interests the Hittite empire may have had in interfering directly in the production of pottery on an empire-wide scale as has been recently suggested (Gates 2001; on less direct strategies see Korbel 1985, Müller-Karpe 2002b).

Starting with proposed scales of production and consumption put forward for the LBA pottery from the Upper City at Boğazköy-Hattusa (Müller-Karpe 1988, 163), the settlements at Norşuntepe (Korbel 1985, 125) and Gordion (Henrickson 2002, 1993; Henrickson and Blackman 1996), it is clear from ethnographic and ethnoarchaeological observations that previous estimates were unrealistic and, in fact, mutually exclusive in their terminologies. Müller-Karpe (1988, 163) has estimated the total output of the ceramic production quarter excavated between 1978 and 1980 in the Upper City at Boğazköy-Hattusa to at least 10,000 vessels over the entire period of its existence.

> *Die Gesamtproduktion des ergrabenen Töpferviertels im Laufe seines Bestehens kann wohl auf mindestens 10 000 Gefäße geschätzt werden.*
>
> (Müller-Karpe 1988, 163)

Five kilns and associated wasters made up this production area and the last two phases of occupation in the Upper City to which they were found to belong, was originally thought to have stretched from about 1240/1235 to 1200/1190 BC (Parzinger and Sanz 1992, 72-73). These dates do now have to be revised backwards due to new archaeological evidence for an earlier occupation of this part of the city (Mielke, Schoop and Seeher 2006). Six further kilns belonging to the same phases of O.St. 3 and 2 were recorded in the 1982-1987 excavation seasons (Parzinger and Sanz 1992).

The figure of 10,000 vessels produced over a period of 35 to 50 years, to take the original and now to be revised timeframe, as a reference point, using up to five kilns for the area excavated between 1978-1980 is minute in comparison to ethnographically observed production rates. As discussed earlier, Roux (2003) describes an average of 6,000 vessels as annual average for small-scale and part-time village potters and of 15,000 vessels for full-time suburban specialists in modern-day rural India. It is equally tiny in regards to the recently estimated annual consumption average of 12,000 vessels by the Mycenaean palace at Pylos (Whitelaw 2001, 62). With a settlement area of ca. 15 ha, the town of Pylos is estimated to have housed approximately 3,000 individuals, consuming around 37,500 – 75,000 pots per annum, a lower status Mycenaean household using between 50 to 100 vessels. The entire polity, estimated to about 2000 km^2 and ca. 50,000 individuals, is thought to have consumed an annual average of between 612,500 to 1,225,000 ceramic vessels (Whitelaw 2001, 63-64). From ethnographic data Whitelaw (2001, 71) estimates that the annual ceramic requirements of the Pylos palace were met by four part-time, seasonal potters.

Although these figures cannot simply be transferred from Mycenaean to Anatolian contexts, the revealing results of Whitelaw's (2001) exercise help to put into perspective what sort of amounts of pottery are required, on average, by households, small-scale polities and central institutions in a LBA Mediterranean context. Only, the Hittite capital with 180 ha is vastly bigger than the town of Pylos and it included palatial and more than thirty temple/large-scale structures. It is also estimated to have housed a minimum of around 15,000-20,000 people. This is not to mention the extent of the imperial polity and its ceramic consumption.

Excavated domestic households are as rare in the LBA Aegean (Whitelaw 2001, 64), as they are in contemporary Anatolia. Yet, the annual consumption of 50 to 100 vessels by lower status Mycenaean households may nevertheless serve as a general

guideline for consumer demands. In this way, the assumed average annual demand of 30 to 50 vessels for the entire LBA settlement at Norşuntepe (Korbel 1985, 125), made up of four sizeable houses on the top of the mound and additional structures on the southern-terrace, seems far removed from realistic consumption levels. Korbel's (1985) estimate certainly argues contra the often-cited mass-production of the same pottery. Yet, even figures based on Whitelaw's (2001) consumption levels would not suffice to keep even a part-time specialist busy at Norşuntepe. Strong variation in morphological aspects of individual vessels further argue against standardisation and mass-production at this particular site.

In summary, Anatolian archaeology needs to adopt more rigorous definitions for the terminologies it employs and gain a realistic notion of, in this case, rates of ceramic production and degrees of standardisation by different types of craft-specialists as well as the average demands the state and private producers placed on their potters. For the moment, these notions are both too small and too grand. For one, the consumption rates of even only one part of the temple quarter of the Upper City as well as the houses at Norşuntepe must be expected to have been much higher than previously thought. Conversely, the level of production needed to satisfy more realistic demands on the potter's industry is smaller than the unqualified use of terms such as mass-production would imply and the conclusions of imperial involvement they automatically conjure. This, however, does not mean that the potters involved in the production of LBA NCA pottery were not highly skilled craft specialists, whose low-investment, wheel-thrown products are clearly the result of routinised production sequences. In the absence of detailed statistical analyses of metric dimensions of typical NCA bowl types from single production events or at least storage contexts, the level of this standardisation cannot be assessed conclusively. The same applies to the assumption that NCA vessels, particularly the ubiquitous bowls, may contain standard volumes that in turn may be relevant in imperial strategies of control (e.g. Roller 1987, 1-2).

4.6.1. The Technological Style of NCA Vessel Forms in Regional Contexts

To date, the only extensive technological analysis of NCA-style pottery from a peripheral site was conducted by Henrickson (e.g. 1993, 2002) at Gordion. Henrickson demonstrated that the clay for LBA pottery was sourced in the vicinity of Gordion and that the forming sequences of some LBA vessel types closely matched those used at Boğazköy-Hattusa. He thus concluded that more than solely formal similarities link the two sites.

LBA pottery from Gordion levels YHSS 9-8 (ca. 1400-1200 BC) derived from soundings cut into LBA trash and wash strata with large pits and small semi-subterranean buildings on the main mound. The standardised appearance of the ceramics and their simplicity have been emphasized in various publications, including limited vessel forms and clustering of vessel sizes (Henrickson 1993, 1994, 2002, Henrickson and Blackman 1996).

All "wares", understood as "characteristic clay choice and preparation, appearance, vessel forms, production sequences, and overall organisation of production" (Henrickson 1993, 95), are described as buff with colour variations ranging from creamy-white to buff, reddish-orange or brown and compare with those at Hittite centres. Primary forming techniques, which are observed to have been neither complex nor time consuming, were found to be "standardised". Vessel size was the main factor determining variation in production sequences. Secondary forming methods involved trimming or shaving. In the case of bowls, where round as opposed to flat bases appear to have been more popular, this would have added additional production steps. Rim profiles are simple, rounded and smoothed. Rim shapes are thought to be largely determined by smoothing rather than the result of a deliberate creation of specific

profiles as demonstrated by variations of rim profiles on individual vessels. Smoothing was the usual finishing method.

Henrickson (1993; 1994; 2002, 129) found the basic production sequences for the LBA Gordion pottery to closely resemble those of Boğazköy-Hattusa during the last decades of occupation at the capital (compared to Müller-Karpe 1988). This he considered significant in comparison with Iron Age ceramics from Gordion, where local potters of the Persian and Hellenistic periods imitated shape and stylistic details of Greek Black Glazed pottery. Forming and finishing techniques, however, were of local technological style.

The observed standardised features of the Gordion ceramic assemblage were interpreted as evidence for mass-production by specialist potters (Henrickson 1993, 107). This explicit focus on the technological aspects of the Gordion ceramics has taken the argument a large step forward from mere formal comparison. It has highlighted a profoundness of similarity not necessitated by purely stylistic imitation, which indeed appears to indicate strong links between Gordion and the NCA plateau in the LBA II. One aspect of the Gordion investigation is of particular interest for the wider interpretation of the NCA ceramic phenomenon. It concerns the observation that the most diagnostic vessel part for the identification of NCA influence, the rim, on the most frequently encountered vessel types is not the product of the potter's intention to express a particular "style" but the apparent lack of such a desire.

In the absence of such detailed work from any other peripheral site, a readily accessible technological aspect of LBA pottery is fabric composition. Technological choice in the type of temper is a starting point for the assessment of cross-regional ceramic standardisation in LBA Anatolia and whether the same standards of production existed in the different regions of the Hittite empire. As cultural practices, the taste for

and use of specific ceramic types and their manufacture are constituted by conscious as well as internalised, or unconsciousk, choices as part of cultural expression, and by extension possibly also of political association or rejection.

Fabric composition, in the first instance, presents a set of active technological choices on the part of the potter, which are based among other variables on his/her training and traditional knowledge and skill. Environmental factors such as the accessibility of raw materials may play a part, but it seems highly unlikely that choices between organic and inorganic temper in the environmental context of Anatolia were determined by availability of raw materials as recently suggested by Müller (2005, 111). In a less deterministic perspective, training and traditional knowledge have a larger share in the potter's choices as his/her selection of temper influences the properties of vessels in subsequent stages of production and use (Rice 1987, 408).

Typical 2nd millennium BC NCA pottery is exclusively tempered with mineral elements; no organic materials are used (Parzinger and Sanz 1992, 36-39; Müller-Karpe 1988, 16; Fischer 1963, 31). Fabric descriptions from Gordion, Beycesultan, Aphrodisias, Porsuk and most pottery from Tarsus and Korucutepe share this general characteristic. However, the LBA II ceramic assemblages of Norşuntepe (Korbel 1985, 124) and Tille Höyük (Summers 1993, 48: "drab ware") in eastern Anatolia are characterised by the use of organic temper in addition to mineral inclusions. Pottery from earlier LBA levels at Tille Höyük such as the hand-made combed and some of the wheel-made buff simple wares also use organic temper, which implies a degree of technological continuity at the site. One type of fine orange-burnished ware at Korucutepe is reported to contain chaff temper (Griffin 1980, 5). At Tarsus too Slane lists a number of shallow bowls/plates (Slane 1987, Nos. 537, 539, 643, 644, 645, 652, 654, 664, 689) as well as miniature vessels (Slane 1987, Nos. 529, 545, 661, 683, 705) with NCA affinities that are partially organic or shell-tempered from LB IIa and LB IIb contexts. At Kinet Höyük

LBA fabrics contained ground shell as well as small quantities of vegetal temper (Gates 2006, 305).

While these differences serve to confirm local ceramic manufacture as opposed to NCA import, they also argue against an empire-wide standard of pottery production on a technological level most prominently seen at Norşuntepe and Tille Höyük. This then challenges Gates' (2001, 141) suggestion that "by reading fabric and shape descriptions for all relevant site publications of LB II ceramics", the success of the Hittite empire in maintaining and enforcing standards of ceramic production can be appreciated. Ceramic traditions which employ both organic and non-organic temper are the "Mitannian" and the Middle Assyrian traditions, which stretch northwards via the Habur triangle and the Upper Tigris (Pfälzner 1995, 228-229; Abb. 135-136; Roaf and Schachner 2005, Fig. 1-2) and whose influence on south-east Anatolian potters warrants at least consideration.

4.6.2. Pre-Firing Potmarks – Signs of Control or Cooperation?

An attachment in the sense of direct imperial control over provincial potters' industries has been suggested recently on the basis of pre-firing potmarks on NCA style vessels across Anatolia. Gates (2001) has suggested the signs incised prior to the firing process on plain vessels are the symbols of "a professional potter's industry" (cf. Wood 1990, 45) where the scale of mass-production demands cooperation on various levels. On the basis of ancient and ethnographic analogy, the marks are interpreted as an "agreed device to record individual efforts in cooperative enterprises [...] where payment – in any form was appropriated individually" across the Hittite empire (Gates 2001, 141). Previous interpretations have tended to focus on the potential epigraphic meaning of a small number of symbols similar to hieroglyphic Luwian signs. Functions proposed in this context range from the distribution of rations to the marking of containers of goods destined for the king or another state institution as taxation or

levies (Seidl 1972; Roller 1987; Müller-Karpe 1988, 1998; Mielke 2006a, 154-155). In this manner, Gates' (2001) suggestion presents a fist step beyond a conventional focus on a very small number of symbols and the appreciation of the corpus of potmarked vessels as a whole. Nevertheless, the application of simple signs prior to the firing process cannot automatically be equated with a mechanism of imperial supervision or control in general (also Gunter 2006, 358-359).

To begin with, not all LBA sites, among them Porsuk, Norşuntepe and Tille Höyük, within the orbit of potential Hittite control have to date yielded pre-firing potmarks on local ceramics, neither do such marks occur exclusively on plain NCA-style pottery or in the same chronological spans at the different sites (also Gunter 2006, 358). Another factor to be taken into account is the relatively small number of marked versus unmarked vessels in the LBA Anatolian sample that seemingly precludes a function in widespread production control. Although the LBA storage area at Kinet Höyük, contained 43 marked vessels out of 400, a comprehensive survey of published and illustrated pre-firing potmarks at sites in Regions A, C2, F and G2 during the second millennium BC, only yielded around 250 examples.

Ethnographic studies confirm the general observation that marked vessels tend to be much smaller in number than their unmarked counterparts. These studies may also offer a possible explanation for why marks usually appear on plain, standardised pottery in Anatolia and elsewhere. Conversely, they underline the association of pre-firing marks with processes of communal production stages but rarely beyond.

The most commonly cited ethnographic study of this kind was conducted by Donnan (1971) among modern day Peruvian potters. His observations served to interpret the archaeological case of about 10% marked Moche plain cooking and storage vessels (ca. 100 BC to 800 AD) (Donnan 1971, 461). The marks or *signáles,* often similar to the

ancient Moche signs as well as LBA Old World examples, were incised only when potters of different economic units, i.e. households, worked together (Donnan 1971, 465). They served to distinguish the produce of different potters, when storing unfired pots in the same shed or during communal firing to save fuel. Marks were also applied when a potter worked with a different family unit and payment was determined by the amount of vessels produced. Shared firings were observed throughout the present-day Andes and pottery marking is a standard procedure (Sillar 2000, 73).

Not every party involved in communal storage or firing has to mark their vessels and in turn not all vessels have to be incised, as the purpose of the marks is solely to facilitate recognition among potters. Often, vessels can be distinguished by other means such as distinctive variations in forming techniques (Sillar 2000, 73). A Peruvian potter's *signál* usually "... has no special significance to him. On the contrary, its form seems to be rather unimportant and the potters often change their *signál* from time to time" (Donnan 1971, 465). Furthermore, consumers cannot use the marks to identify the product of a given producer, neither are *signáles* a guarantee of quality (Donnan 1971, 465).

Other studies of pottery manufacture among African and Asian communities have recorded similar functions of potmarks. Lindblom noted how in the 1920s Kamba potters in Kenya incised marks prior to firing on plain pottery (cf. Lindblom 2001, 19). The marks do not appear to have fulfilled functions beyond the production process but again related to the household unit the potters belonged to. Similarly, the application of pre-firing marks on the Nicobar Islands during the last century seems to have served to distinguish the work of different potters without subsequent use by consumers (Lindblom 2001, 19).

Although the ethnographic cases, which are admittedly few as well as occasionally ambiguous, cannot provide ultimate conclusions about the LBA Anatolian material, they present a strong argument in favour of a role of pre-firing marks in the sphere of production, their functions at least not intentionally extending beyond the cooperation of potters of different economic units. None of the ethnographic sources observed any post-production functions of these marks, which are most popular with Anatolian scholars.

The proposal that these marks represent individual potter's produce for the purpose of distinction by outsiders such as officials or overseers accountable to the central imperial administration (Gates 2001) is questionable on the basis of the relative scarcity of marked versus unmarked vessels across Anatolia. If the output of individual potters or workshops had been so closely monitored, one would expect all or at least the majority of vessels to have received such treatment. Hence, a direct involvement of the imperial administration in the organisation of pottery manufacture in outlying areas of the Hittite empire cannot base itself on, or be supported by, the pre-firing potmarks from these sites. It seems that the marks on vessels of the plain standardised NCA variety argue for institutionally independent but cooperative production of pottery at sites such as Kinet Höyük.

Corroboration for this proposal comes from the Upper City at Boğazköy-Hattusa, where the only physical evidence for attached pottery production has been uncovered (Müller-Karpe 1988; Parzinger and Sanz 1992). In a thorough excavation in this part of the capital city, 100,000 sherds or 11 tons of pottery were recorded from an area of 7500 m^2 between 1978 and 1980 (Müller-Karpe 1988, 13). Only 11 sherds with pre-firing potmarks, amounting to 0.01% of the total sherd count, were found in this assemblage. The very limited textual evidence on the potter's craft mentions "unfree" individuals that were bought by the palace and the temple (Müller-Karpe 1988, 152). A treaty between

Tudhaliya IV and Kurunta of Tarhuntassa also details the fate of potters in the light of political agreements (Otten 1988 cf. Mielke 2006a, 173), underlining on the one hand the attached nature of at least part of the potter's craft and the apparent mobility of such specialists within the Hittite political realm as one possible mechanism of cultural spread on the other.

In view of this evidence, one might conclude that there was no need to identify individual effort in a production environment where potters appear not only to have been attached to, but also owned by, the adjacent state institutions. Thus, the only unequivocal instance of state controlled pottery production does not seem to have used pre-firing marks in any significant way. In contrast to incised symbols, impressions of NCA seal types could be seen as elite monitoring of pottery production. But the Boğazköy-Hattusa seals are thought to be those of potters (Müller-Karpe 1988, 163), while Mielke (2006a, 155) interprets them as signs of origin/destination of the vessels' contents (*Herkunftsnachweis*). More detailed analysis of the different pre-firing symbols, their relative frequencies and association with specific vessel forms as well as general archaeological contexts, however, are required to advance our understanding of this aspect of LBA Anatolian pottery production.

4.6.3. Cultural and Economic Implications of NCA Pottery in Regional Contexts

The question about the mechanisms of cultural transfer other than a vague notion of imperial domination, thus, has to focus on the functions of the most prominent NCA vessel types as well as contexts of production and consumption in the Hittite heartland to find some indications about the social, cultural or economic changes their introduction in peripheral contexts may have brought to or implied for local populations.

Plates with stepped profiles are thought to have functioned primarily in the preparation of food, possibly the baking of bread (Schoop 2006, 231; forthcoming; Schoop 2006a,

128-130). This vessel type is not attested in the MBA central Anatolian repertoire and, therefore, seems to constitute the material expression of a new cooking and/or consumption practice. Plates are known from a variety of both state controlled and domestic contexts at excavated sites and have also appeared in survey material across the central plateau. At peripheral sites, the appearance of NCA plates may indicate the adoption of new cooking habits and possibly food consumption in general.

A more clear-cut connection with the Hittite state apparatus is offered by the proliferation of shallow bowl types in the last stage of LBA ceramic production in the Upper City of the Hittite capital, where such bowls account for ca. 40% of the Upper City Level 2 (or 3, depending on publication) repertoire and were found, often in tight packs, in association with pottery kilns as well as distributed throughout almost all finds-contexts (Müller-Karpe 1988, 101, Tafel 50). Parzinger and Sanz (1992, 68-70) have observed that the consumption of this plain pottery was apparently restricted to the temple quarter of the Upper City and reached other parts of the capital such as the palace area on Büyükkale and the Lower City only in very limited numbers. Mielke (2006a, 169-170) too observed a concentration of chronologically late bowl types and other vessel forms on the acropolis of Kuşaklı-Sarissa. Shallow bowls of the types I 1.1., I 4.1.-2. and I 5, thus, appear to present a ceramic household staple used for the servicing of temple storerooms and associated structures in the final phase of LBA occupation.

In Temple 7 in the Upper City of Boğazköy-Hattusa various shallow bowl types were found in stacks in basement rooms (Parzinger and Sanz 1992, 74-89, Abb. 47-49). A range of other shapes, but shallow bowls in particular, may have functioned in the preparation and presentation of food for larger numbers of people. These could be the permanent temple personnel, the labour-force required for public building projects or military contingents. Together with all these functions the pottery could also have been

the kitchen hardware required to furnish religious festivals of which there were up to 165 in the official calendar (Bryce 2001, 188) and which included ritual feasting (e.g. Goetze in Pritchard 1958, 358-361; Singer 1983, 141-160).

A similar case has been convincingly argued for the LBA palace at Pylos by Whitelaw (2001), where large numbers of plain pottery related to the consumption of liquids were found stored in several rooms of the palace (see Whitelaw 2001, Fig. 2). In view of the plain and relatively simple character of the pottery at Pylos, Knappett (2001) has suggested that it was not of intrinsic value invested through the virtuosity and time spent on its production, but that plain vessels of this type could become "politically charged" when used in specific consumption contexts, namely during feasting and drinking as a form of social display.

It is, thus, not impossible that local elites adopted NCA household furnishings for the purpose of public display, not in the form of luxury fine-ware, but as the equipment for large-scale festivals and feasting. The presence of NCA miniature bowls and juglets fit rather well into this picture (Schoop forthcoming). Unlike in the case of the Upper City at Boğazköy-Hattusa and more recently at Kuşaklı-Sarissa (Mielke 2001; 2006a, 174), we have no unequivocal archaeological or textual evidence for the circumstances of the production of this pottery beyond the central plateau, nor as to whether local elites oversaw its manufacture.

The diversity of distribution patterns and relative frequency of vessel types at different sites suggests primarily local processes of conscious adoption and changes in production strategies as the possible result of transformations in practices of social display. In this way, they may reflect alterations in the value system governing ceramic consumption. The increasing coarseness and simplification of local ceramic assemblages across Anatolia and, with the exception of egg-shell bowls (Schoop,

forthcoming), the apparent absence of fine, high-status table wares suggests that vessels of other media, particularly metal, gradually replaced fine ceramics at the apex of a value hierarchy during the period of the Hittite empire. Few imports of fine pottery such as the otherwise popular Mycenaean or Cypriot wares have been found at the peripheral sites investigated or in the Hittite heartland. Only the special purpose libation arms, spindle bottles and lentoid flasks of the Red Lustrous Wheel-made tradition were found in large quantities at Boğazköy-Hattusa and in smaller numbers at peripheral sites (Kozal 2003).

4.6.4. Preliminary Conclusions

In the past, some scholars have remarked that sites peripheral to the Hittite imperial heartland show a "truncated repertoire" of NCA vessel types (e.g. Goldman 1956, 203-205; Gates 2001, 138; Henrickson, 2002, 129; Gunter 2006, 353, 359;). The preliminary results obtained by the above study confirm the fact that LBA ceramic repertoires across Anatolia do not feature the full formal spectrum known from the Hittite capital. Yet, the "truncated" repertoires at these sites neither overlap completely, so as to form a "provincial service", nor are all the shapes that have counterparts at Boğazköy-Hattusa innovations of the LBA II or even the LBA. Also significant are the clearly different methods of clay preparation at Norşuntepe and Tille Höyük, and less prominently also at Tarsus and Kinet Höyük. Moreover, this analysis has highlighted that the application of terms such as standardisation and mass-production as well as of standards of manufacture call for detailed archaeological research of a kind barely begun in LBA Anatolia and that generalised assumptions about levels of ceramic demand and the scale of production required to meet them need to be reviewed.

The picture of LBA NCA ceramic influence is a varied one, rather different to the imposition of, for instance, the standard Middle Assyrian repertoire at northern Mesopotamian sites (Pfälzner 1995, 227). The only sites for which an aspect of state

control may be proposed in the light of a proliferation of a set of very specific vessel types are Korucutepe and possibly also Tille Höyük. But even so, NCA traits are already present at Korucutepe prior to the textually attested taking control of this area by the Hittite empire. The evidence from Tille Höyük, while presenting a relatively rapid introduction scenario at a very small defended, and thus, specialised, site, is too scantily published to allow any firm conclusions. Technological differences between the Tille Höyük material, as well as that of Norşuntepe, and the NCA tradition point to a lack of centrally controlled standards of ceramic production. The clearly local technological character of the pottery from Tille Höyük, however, need not exclude the possibility of shallow bowls serving in official consumption contexts at the site, which is the only securely identified LBA settlement in the Adıyaman dam survey area. The identity of the host and consumers is, however, difficult to determine on the basis of the available evidence.

As will be discussed in greater detail in Chapter 6, a number of biconvex seals of typical NCA style have been found at Tille Höyük, Norşuntepe and Korucutepe that establish some level of administrative contact between the Hittite imperial authority and these sites. The Tille Höyük seals, however, have come from contexts older than those showing generic ceramic links to the central plateau. Further, the seals from Tille Höyük and Norşuntepe cannot be read conclusively, while those found in pit and domestic contexts at Korucutepe identify local royalty and administrative staff, whose names at least match persons known from among the administrative cadres of the Hittite capital (Chapter 6). The presence of local royalty with cultural aspirations directed towards the NCA plateau at Korucutepe, or at least in the wider region, seemingly favours an interpretation of the pottery in the same way; as an expression of cultural and social adoption induced, no doubt, by political and military contact with, and eventual dependency, on the Hittite core region.

A similar process may be argued for the site of Tarsus in Region F, which shows a gradual strengthening of NCA ceramic influence throughout the LBA but whose overall repertoire seems to have retained a stronger degree of formal diversity as well as of local independence in comparison to, for instance, Korucutepe Phase J. As will be discussed in Chapter 6, evidence of NCA administrative technology stretching from the Middle Hittite to the Empire Period and a seal impression of a local, pre-imperial king attest to a long-standing administrative relationship between Tarsus and the Hittite empire. Other signs of Hittite concentration of power strategies on this important region are the rock monuments at Sirkeli, one of which portrays the Hittite great king Muwatalli II, while a relief of Hattusili III and Puduhepa guards the northern entry to one of the routes leading to the Cilician plains. A number of regional forces also used the medium of rock monuments and the same stylistic conventions as Hittite great kings for their own claims to local power in Region F, indicating a rather unsettled picture in terms of the actual degree and stability of Hittite control (Chapter 6).

The regional settlement trends discussed in the following chapter will show that south-eastern Anatolia as well as Cilicia seemingly underwent a similar increase in settlement numbers during the LBA. An indication of relative stability in regional socio-political arrangements between the preceding phase and the LBA in these two regions is the continuity of MBA and LBA centres at the top of regional settlement hierarchies.

A rather different trend will be observed for the southern part of the central plateau, which experienced a dramatic shift in settlement locations and the foundation of a series of new regional centres during the LBA. The site of Porsuk, whose ceramic repertoire of Niveau V shows very close ties with the standard assemblage of Boğazköy-Hattusa seemingly formed part of this wider development, which, as I will argue in the following chapter, may present a spatial signature of the imposition of direct Hittite control. Cultural ties between the southern and the northern central

plateau in the form of pottery, however, stretch back into the MBA. The close match of almost the entire local repertoire with that of Boğazköy-Hattusa speaks of broad cultural connections between Porsuk's inhabitants and those in the Hittite heartland further north. Direct Hittite political control over this site is, thus, likely when ceramic and settlement evidence as well as the strong fortified character of the site and its strategic position are viewed in unison. The pottery evidence alone, however, does not indicate the use of specific vessel types or standards of production as political or economic tools. The same appears to apply to Gordion on the western periphery of the Hittite core region.

Further to the west, the border of NCA ceramic influence, and as will be seen in subsequent chapters of all other types of administrative and ideological interaction, is more sharply delimited than in the south, east and south-east. Despite the presence of some NCA influence at the very end of the LBA and the transitional EIA phase at Beycesultan, the ceramic tradition of the site, as that of Aphrodisias, lies effectively outside the realm of this pottery phenomenon both in terms of formal similarities and the socio-economic significance of pottery in general. With the exception of a few generic plates at Beycesultan, western Anatolian societies, unlike those to the south, east and south-east did not show any interest in the adoption of NCA plain wares and the functions associated with its hall-mark vessel types. At another level, the change from intrinsic to context based political value of plain and, to the eye at least, standardised pottery may not have resonated with local socio-political and cultural traditions. From the textual sources it is clear that Hittite control over western Anatolian was at best indirect and at worst rigorously contested (Chapter 3). Unlike in the realm of ideological display, NCA type pottery was not a medium of cultural emulation by west Anatolian elites as the different regions mostly retained their independent ceramic characteristics.

Overall, the Anatolian ceramic evidence suggests a cultural pattern closer to the "Mitannian" than the "Assyrian model". "Mitannian" political rule, as that of the Hittites, did not coincide with the extent of its ceramic influence but included three ceramic zones (Pfälzner 1995, 198). The varyingly "truncated repertories" of NCA ceramic influence of seven of the eight sites investigated in this chapter point towards almost as many individual processes of local cultural adoption. In this way, although the developments in LBA Anatolia have a clearly political context, the issue of "Minoanisation" presents itself as a comparable case in point. The spatially and chronologically varied expressions of this phenomenon were recently characterised by Broodbank (2004) as unlikely to be representative of a unified mode of behaviour or process with one explanation improbable to fit all regionally specific uptakes of Cretan cultural traits and associated practices.

With the exception of Porsuk and possibly Gordion, which seem to be part of the NCA cultural system as a whole, the evidence from Tarsus, Korucutepe and Norşuntepe as well as Beycesultan, show the signs of selective adoption over varying time-frames. A potential explanation for this trend may be processes of elite emulation (Higginbotham 1996, 2000) not in the form of luxury items, although this may also have been the case, but of practices such as, for instance, religious ceremonies which required the provision of food and drink to large numbers of people as well as a wider shift away from pottery as objects with intrinsic value to the acquisition of political charge in specific contexts of consumption. The open vessel types required for such purposes clearly dominate local assemblages, while with some exceptions, cooking pots, jars as well as closed containers with NCA affinities are less frequently encountered.

These conclusions are preliminary until further excavated material becomes available that allows social differentiation of ceramic material within sites and between different types of settlements as well as the analysis of standardisation, motor habits and

technological style. They nevertheless illustrate that the nature of the sample at hand is more varied and requires more nuanced explanations than previous interpretations allowed for. The next chapter presents a first step towards the regional contextualisation of the spatial patterns observed in the ceramic records of different peripheral locations. Drawing on survey data from across Anatolia and northern Syria, the analysis that follows aims to reconstruct regional settlement systems and their transformations over time, and interrogates the results for indications of imperial control or relative political independence.

CHAPTER 5: IMPERIAL LANDSCAPES? - CROSS-REGIONAL SETTLEMENT TRENDS IN LBA ANATOLIA

Due to the urban-centred nature of Hittite texts (Chapter 3), the exploration of the countryside is forcibly the prerogative of archaeology (Gorny 2002, 43-44). Only few investigations into Hittite settlement trajectories, urbanism and the conceptual interplay between town and hinterland have been conducted to date (Beckman 1999; Archi 1980a, 1976-77; Thalmann 1990; Bartl 1997; Schachner 2006; Mielke forthcoming). Macro-level settlement studies in particular, besides brief mentions of the sizes of some excavated sites (Archi 1976-77, 101), draw their conclusions principally on the basis of textual-historical and linguistic evidence and lack the fundamental connection of their findings with the archaeological record.

Diachronic developments in settlement systems are here treated as expressions of regional socio-political and economic organisation and as sensitive indicators of continuity and change within these domains, including processes of imperial integration (e.g. de Montmollin 1989; Alcock 1993, 3-6; Roberts 1996, 29). Archaeological field survey, which is the primary source of data for this type of analysis, has seen a dramatic surge in Turkey and neighbouring regions over the last decades and the map published by Forlanini and Marazzi (1986, TAV. X) in the *Atlante Storico del Vicino Oriente* (Map 37) has to be substantially revised. A growing, but essentially disarticulate, corpus of regional settlement data is available in various stages of publication and, as in other parts of Western Asia and the Mediterranean (Alcock and Cherry 2004a), it calls for comparative inter-regional syntheses (Beckman 1999, 161). In *Ethnoarchaeology of Anatolia: Rural Socio-Economy in the Bronze and Iron Ages,* Yakar (2000) refers generally to the results of surveys from across Anatolia. He, however, avoids taking a critical stance on the problems inherent in the primary data

and does not arrive at cross-regional conclusions. The results of most survey projects in Turkey, thus, do not, in general, inform broader interpretations about the workings of the Hittite state and empire. With few past exceptions such as, for instance, Whallon (1979), Ökse (2000a, 2001a, 2006) or Kealhofer (2005) and projects still in the process of final publication (e.g. Matthews 2000a, b; Baird 1996-2001), a general lack of research designs, extensive survey methods and varied quality of publication may be to blame for the reluctance of Anatolian archaeologists to view their survey data as complementary rather than subordinate to the results of excavations and to take them beyond the descriptive or primarily text-driven interpretations.

5.1. Regional Settlement Systems in and Beyond the Hittite Empire - The Approach

5.1.1. A Comparative Perspective

This chapter seeks to address some of these, as yet largely unexplored, questions of regional and cross-regional settlement developments in LBA Anatolia and the relationship between these and the processes of political and economic integration that form part of imperial development. The spatial scope of empire requires an analytical perspective beyond that of the individual region and a comparative approach to published and unpublished survey data from across Anatolia and, to a lesser extent, northern Syria is therefore adopted in this study. Settlement data, broadly grouped into the regional units defined in Chapter 3, are investigated using basic techniques of spatial analysis and evaluated within an interpretive framework that takes account of culture-specific aspects of Hittite state administration and economic organisation (also Chapter 3). Emphasis is placed on both the broader picture of imperial development and the idiosyncratic trajectories of its constituent parts.

The following research questions relate to the hypothetical propositions put forward in Chapter 2 and concern the extent and nature of political transformation that are potentially visible in archaeological settlement records.

- What are the overall trends in settlement systems across Anatolia before and during the LBA?
- What specific trends can be observed in regional settlement systems before and during the LBA?
- What are the rates of continuity in settlement location between the MBA and the LBA and, wherever the data admit, between the OH and the Empire Period?
- Can changes in settlement intensity and location be discerned for the LBA and, more specifically, the Hittite imperial phase, overall and in different regions?
- Can changes in regional hierarchical organisation be observed in different areas?
- What form do these changes take? (e.g. nucleation/dispersion, abandonment/establishment of settlements at particular levels in the settlement hierarchy?)
- How can observed differences in regional settlement systems be interpreted in the context of Hittite imperial expansion?
- Can changes discerned in regional settlement hierarchies be linked to Hittite political/administrative strategies?
- Is there evidence for a development from regional to supra-regional settlement integration?
- What are the available explanations for the different settlement trends observed between regions?
- Can the textual record aid in the explanation of specific regional settlement trends? And how does the archaeological analysis complement or contest the picture gained for different regions through the textual sources?

The location, organisation and distribution of settlements underlie complex processes dependent on a number of intertwined factors, which include physical and environmental conditions. Settlement systems, however, are also decisively shaped by historical and socio-political circumstances (Roberts 1996, 29). Archaeological surface survey and associated methodologies can provide the raw data for the analysis of "the spatial operation of power and dominance" (Cherry 1987, 146) within large political entities such as states and empires. The broad geographical and chronological scale of archaeological landscape studies render this method uniquely suited for the exploration of aspects of human behaviour, which textual sources are often silent about either for social or political reasons or because the time-depth of *longe-durée* trajectories visible in the archaeological record surpasses the scope of historical memory. Like most other archaeological methodologies, regional survey data in turn lack the chronological fine-tuning of the historical record. The results of field survey depend on the questions and goals set for each individual project as well as the methodologies employed in the various stages of data collection, recording and analysis. In general, however, archaeological survey can provide the data to answer broad questions about settlement preferences, land-use and agricultural activities, overall demographic trends as well as regional socio-political organisation and complexity (Cherry 1987; Alcock 1993, 34; Banning 2002, 27-38).

Comparative regional approaches have been demonstrated to lead to fruitful results, particularly in the investigation of spatially extensive phenomena such as urbanisation, state-formation and local-imperial relationships (e.g. Adams 1981; Alcock 1993, 1994; Cavanagh 1995; Wilkinson 2000b; Cherry and Davies 2001; Wilkinson et al. 2005). In practice, a comparative analysis of this kind is confronted with a set of biases, which concern all archaeological surface investigations and which range from past cultural variables such as the rate of artefact production, disposal and deposition, via natural and cultural post-depositional processes, to field and interpretive methodologies

employed by archaeologists as well as the natural conditions prevalent in modern times (e.g. Schiffer 1987; Ammerman 1981; Banning 2002, 39-65; Wilkinson 2003, 32-43). In addition, questions of divergent quantity and quality of data as well as compatibility issues present problems specific to comparative approaches. Archaeological source criticism is, therefore, methodologically fundamental for cross-regional settlement studies in general (Alcock 1993, 49-53), and most particularly for the comparison of Anatolian survey results.

5.1.1.1. Archaeological Source Criticism – The Anatolian Situation

Anatolian archaeology, despite recent efforts, lags somewhat behind in the adoption and critical assessment of methodological and theoretical developments long established in other regions' archaeological traditions (Gorny 2002; Ökse 2006 an assessment of the analytical potential of survey evidence). As regards regional surveys in Turkey, so far, mostly primary data has been collected and in varying detail. Among the characteristic features of many projects are the apparent lack of specific research designs and objectives beyond the recovery of previously unknown sites, highly variable data quality and scarcity of final publications (Erciyas 2006, 53-60). Yet many of the surveys conducted in Turkey are pioneering undertakings in that they deliver more or less systematic information on what are often archaeological virgin territories. Nonetheless, a process of model building, testing and revision can only fully begin once a first, detailed but synthetic analytical step has been taken and a clearer picture of the overall settlement situation prior to and during the LBA has been established.

In the recent volume *Side-by-Side Survey: Comparative Regional Studies in the Mediterranean World*, Alcock and Cherry (2004a) draw together a series of papers to evaluate the problems and benefits of comparative cross-regional analysis. Synthetic approaches to multiple sets of survey data are not a novelty in the Western Asian context (Adams and Nissen 1972; Adams 1981; Wilkinson 2000a, b; Wilkinson, Ur and

Casana 2004; summary in Matthews 2003, 47-55), but the resurgence of interest in comparative studies in Mediterranean archaeology has led to a self-conscious re-examination of important theoretical and methodological issues. In many of the discussions an emphatic stress is put on the critical assessment of individual survey methodologies and questions of compatibility relating to sampling strategies and chronological differentiation as the underpinning of any meaningful investigation. In this manner, the following set of queries forms the basis for the comparison of Anatolian settlement data in this chapter:

- the criteria for the definition of sites
- the intensity of search procedures
- the relationship between on- and off-site data
- the representativeness of the sample
- the relative confidence with which material can be dated in different regions
- the differing lengths of chronological phases
- the contemporaneity of sites
- the compatibility of chronological schemes employed by different projects
- the extent to which environmental changes may have affected site visibility and obtrusiveness in different regions and at different times.

(Alcock and Cherry 2004b, 5; Alcock 1993, 49)

Survey goals, theoretical stances and field sampling techniques, alongside topography and vegetation cover, influence the collection of data sets on the most basic level. Survey methodologies may be intensive, including the systematic field walking of at least samples of the total survey area, while extensive surveys may be conducted single-handedly on foot or by bicycle (Burney 1956) or, as is the more recent practice, by larger field teams in four-wheel drives, which use local informants as well as sightings for site recovery. A direct relationship has been proposed between the intensity of the survey strategies employed and the numbers of discovered sites (e.g.

Bintliff and Snodgrass 1985, 135-136). In addition, the off-site focus of modern intensive survey projects, and their detection of often continuous, but varyingly dense, scatters of cultural material across landscapes has led to a conceptual debate about what constitutes a "site", particularly in the Mediterranean context (Cherry 1983; Dunnel and Dancey 1983).

The concentration of Mediterranean projects on comparatively small and intensively surveyed regions as well as the specific practical and theoretical problems encountered (Bintliff and Sbonias 1999), while clearly furthering the understanding of the archaeological survey record and the refinement of analytical methodologies, do not always resonate with the research questions posed in other regions and the prevalent archaeological and natural conditions within these. Scholars concerned with the economic interaction and socio-political dynamics in the large political entities of Western Asia, China or the New World have found the Mediterranean methodological "myopia" to impede wide ranging survey coverage and subsequent cross-regional analyses of macro-scale phenomena (Blanton 2001, 628-29; 2004). Western Asian landscapes, environmental conditions as well as settlement traditions are often very different from the Mediterranean situation. Wilkinson (2003, 38; Wilkinson, Ur and Casana 2004, 189-190) and others have recently pointed out that, although Western Asian projects on the whole tend to fall in the lower end of intensity charts, the lower site densities recovered by modern surveys, which tend also to have an off-site component, are not purely a reflection of method but indicate *real* differences in ancient settlement strategy to the Mediterranean situation.

Whatever the archaeological methods applied, most landscapes are palimpsests of human and natural processes, with the result that traces of human activity from all periods, but particularly the early stages of human history, will be obscured to varying degrees by subsequent developments. Thus, archaeological survey, which may

include a whole array of satellite, geophysical and chemical methodologies (Banning 2002, 39-65; Wilkinson 2003, 33-43) besides traditional field-walking components can always only recover partial distribution patterns, which naturally pose an obstacle to the interpretation of the life settlement system prevailing in a particular region and period.

The settlement analysis in this chapter includes information from ca. 60 archaeological surveys conducted across Anatolia and to some extent northern Syria (Map 38 and Table 27). The vast majority of these projects, as previewed by Wilkinson (2003, 38; Wilkinson, Ur and Casana 2004, 189-190), fall within the "extensive" category and form at least in this respect a relatively coherent corpus. More recent projects, primarily those with affiliations to the Anglo-American archaeological tradition, also incorporate intensive research methods. They include the Keban Reservoir (Whallon 1979), the Tigris-Euphrates Survey (Algaze, Breuninger and Knudstad 1994), Project Paphlagonia (Matthews 2000a, b), the Konya Plain (Baird 2001, 16) and the Erzurum and Bayburt Surveys (Sagona 1999; Sagona and Sagona 2001, Sagona 2004) as well as the Batman River Survey (Rosenberg and Togul 1991). The remainder comprises travellers' accounts and exploration from the early to mid-twentieth century such as von der Osten's investigations (1927; 1929a, b; 1930; 1933), the travels of Meriggi (1962; 1963; 1965; 1867; 1969; 1971) or the bicycle surveys of Charles Burney (1956; Russell 1980), which despite their obvious shortcomings according to modern methodology, provide important and often still valid information on regions which have received little archaeological attention since. More recent projects are engaged in extensive reconnaissance work, either as part of long-term survey strategies (Özsait 1986a-2005a; Özsait and Koçak 1996; Özsait and Dündar 1997; Özsait and Özsait 2001; Omura 1988-2005; Mikami and Omura 1988, 1990; Ökse 1984-2002) or preceding archaeological excavations as part of the fulfilment of Turkish government requirements (Özgen and Gates 1992; unpublished manuscript).

Table 27 presents a summary of the survey projects included in this study. In the majority of survey projects, definitions of what constitutes a site tend to be guided by implicit assumptions that may be inferred from the terminology used in site listings. The most common distinctions are made between mounds (Turkish *höyük*), flat-sites and hill-top settlements. Conventionally, little ink is spilled on the intricacies of the spatial definition of flat-sites or sherd-scatters as well as the extent of different phases of settlement on multi-period mounds (for an exception see Whallon 1979). Although a more explicit methodological debate about the nature of archaeological sites and their relationships to past settlements is no doubt necessary in the Anatolian context, its lack may be partly explained by the domination of the Western Asian landscape by visually highly distinctive mound-settlements. As discussed in Chapter 3, the traditional focus of archaeology on these prominent features is not entirely unwarranted, at least for the periods of interest in this study, while smaller and dispersed sites, typical of later periods, clearly elude more traditional and extensive methods.

Mound settlements are a characteristic feature of the Anatolian Bronze Age and both archaeological and textual evidence, which has been discussed in detail in Chapter 3, point towards internally nucleated settlement plans throughout this period. Some degree of settlement shift from multi-period höyüks to new settlement locations as in the case of Ortaköy-Sapinuwa and Kuşaklı-Sarissa, however, presents an incipient trend in the LBA. Mountain-settlements (*Bergsiedlungen* - Naumann 1955, 198), most prominently represented by the Hittite capital itself, as well as flat sites also begin to break up the pattern of mound occupation that was clearly favoured in the earlier phases of the Bronze Age.

The "Tyranny of the Tell" and the implicit assumptions about human settlement in many Anatolian survey designs invariably will have led to the over-representation of mound and/or larger as opposed to flat and/or smaller sites. It may, however, be argued that

the degree of bias introduced by prevalent extensive survey methods does not play a highly significant role in the reconstruction of LBA settlement developments in respect of broad questions of political control and integration. Regional differences in average site-sizes and ratios of smaller versus larger settlements may be expected over the large geographical region that constituted the Hittite empire. Intensive sampling in Paphlagonia, for instance, did not yield any significant LBA "background noise" (Matthews 2000a, b), which may indicate a population concentration in comparatively sizable settlements. Conversely, intensive investigations in the vicinity of the Hittite capital revealed numerous sherd-scatters of relatively small settlements at varying distances to the focal point of the fortified city (Czichon 1997, 1998 and 2000).

Topographic diversity is another issue to be considered particularly in the context of Anatolia. The Hittite heartland is located on the northern part of the central Anatolian high plateau, which rises to altitudes of approximately 500 to 1,000 m above sea level. On its southern and northern fringes the plateau is framed by the Taurus and the Pontic Mountain ranges, which reach up to ca. 3,700 and more than 3,000 m respectively. The interaction of lowland areas, high-valleys and plateaus as well as alpine zones, which are populated by sedentary farmers and nomadic groups, was and, in some areas still is, an important economic characteristic of modern Turkey (Kündig-Steiner 1974, 457). Hittite texts also indicate that pastoralism and the exploitation of upland and mountainous areas was an important aspect of the mixed farming economy of LBA Anatolia (see Chapter 3). Documentary sources of the Middle Hittite and imperial phase are pre-occupied with the threat of semi-nomadic populations to the north and north-east of the imperial core region, which occupied the Pontic ranges north of the Devrez Çay and east of the Kelkit İrmak. Similarly, mobile groups appear to have populated the mountainous southern fringes of the central plateau (Beckman 1996, 12-13).

Such marginal zones do not in general receive as detailed archaeological attention as lowland areas due to a variety of mainly practical reasons from difficult terrain to dense vegetation cover (Wilkinson 2003, 185; Banning 1996; Cherry 1994, 99). Only few Anatolian surveys (Sagona 1999, Sagona and Sagona 2001, 2004; Matthews 2000a, b) have made some efforts to include higher-altitude landscapes in their investigations. The concentration of most survey projects below certain altitude levels, around 1000 m in the case of, for instance, the Kastamonu project (Marro et al. 1996, 273), however, forcibly introduces a bias in our perception of LBA political, economic and cultural interactions. Prevailing research strategies are to some extent to blame for the difficulties in the recognition of material culture signatures of groups peripheral to or beyond Hittite effective control (e.g. Glatz and Matthews 2005; Genz 2003, 189).

5.1.2. Dating Survey Sites

The reliability of chronological differentiation on the basis of surface samples, questions of settlement contemporaneity and the comparability of periodisations between surveys are contentious issues in the context of LBA Anatolia. The dating of survey materials chiefly depends on ceramic evidence in the case of Bronze Age Anatolia. The intricacies and implications of 2nd millennium NCA ceramic development are discussed in detail in Chapter 4; suffice it here to briefly reiterate that the formal conservatism of the NCA pottery tradition over more than 600 years leaves only limited possibilities for fine-grained chronological differentiation. Although formal developments do take place between the 18th and 12th centuries BC, the vast majority of vessel types are found over the entire or large portions of the MBA and LBA sequence. Proportional variation in stratified assemblages is the key to a more fine-grained chronological understanding (Müller-Karpe 1988; Parzinger and Sanz 1992; Schoop 2003a, 2006, forthcoming; Mielke 2006a); and surface sampling strategies are, therefore, not ideal for the realisation of fine-grained and differentiated chronological divisions.

The dating of NCA survey assemblages has to work with degrees of probability. Given the presence of the "right" shapes in surface samples, general divisions can be made between an early sequence (*karum* to OH), a middle sequence (OH to early Empire) and a final sequence (later Empire) that follow observations from excavation contexts from Boğazköy-Hattusa (Müller-Karpe 1988; Parzinger and Sanz 1992; Schoop forthcoming).

The nature of the NCA ceramic development, thus, produces a mismatch between material culture and political-historical development, which accounts in part for the lack of a uniform praxis of periodisation in survey and excavation reports from across Anatolia and presents perhaps *the* major obstacle to a systematisation of survey data crucial for comparative analysis. In the process of standardisation of survey information, I have mostly followed published terminologies for the sake of simplicity as well as not to add an unnecessary level of interpretation. Published reports tend to offer the medium-term resolutions of MBA-LBA subdivisions. At the same time, more fine-grained dating is occasionally proposed, in the form of Old Hittite and Empire Period labels. Due to the unavoidable mismatch between these terminologies, some further qualifications are necessary. In this study, the label "MBA" is used chiefly to refer to the period preceding Hittite state formation and in ceramic terms the first part of the developmental sequence, while "LBA" is used to refer to the entire life-cycle of the Hittite state and empire, even if state formation begins in the last decades of the MBA. With the onset of the Old Hittite Period, some ceramic developments can be observed (2^{nd} part of sequence) while a third and last step occurs at the end of the historical Empire Period. The "Old Hittite" label as applied in this study, thus comprises the historical phases of the OH, MH and early Empire Period, while the "Empire" label is used to distinguish the last developmental sequence of NCA pottery. This terminology necessarily glosses over some of the complications inherent in the ceramic record; yet

further analysis requires a working definition, which may be updated as research progresses (see Schoop 2006).

Differential conceptions of the above chronological labels in terms of their absolute lengths by individual projects pose a further problem. This concerns mainly the inclusion of the Old Hittite Period in the MBA and the use of "LBA" labels to denote the Hittite imperial phase proper by, for instance, the Central Anatolia (Omura 1988-2005; Mikami and Omura 1988, 1990) and the Samsun and Amasya surveys (Dönmez 2002). A similar chronological subdivision is implied for the Sivas Province survey (Ökse 2000a, 99). As regards the NCA Anatolian ceramic chronology, it does not seem appropriate, however, to enlarge the MBA artificially (Schoop, forthcoming). The results of the above surveys have been accommodated to fit the general chronological subdivisions as much as possible.

Not all regions included in this study are dependent on the NCA ceramic sequence. Local sequences, documented through excavated type-sites, are available for different parts of western (Troy, Beycesultan) and eastern Anatolia (Arslantepe, Korucutepe, Norşuntepe and Tepecik) as well as different parts of northern Syria (Chapter 4). Conversely, in areas with no excavated type-sites, chronological subdivision is hampered by the absence of local pottery sequences and regional ceramic traditions may be misdated or missed altogether (e.g. Kuzucuoğlu et al. 1997, 292; Glatz and Matthews 2005; also Seeher 2005, 40).

Questions of the interrelationship between ceramic traditions and political organisation are discussed in detail in Chapter 4. Clearly, regional cultural differences are significant for the reconstruction inter-polity relationships in the Hittite imperial context. Political boundaries or interconnections, however, cannot be deduced simply from material culture differences/similarities, which have to be made the subject of enquiry rather

than tacit assumptions. The nature of most of the survey data investigated in this chapter, however, is generally not conducive to answering such questions and so, while taking account of different cultural regions, the focus of analysis rests primarily on settlement patterns in these areas.

Returning to the primary survey data, the reliability of dating can be best controlled when drawings of the diagnostic pottery are published with the survey reports. Due to the preliminary nature of almost all surveys included in this study, such primary information is not always available. In these cases, there is little choice but to accept the surveyors' verdict and in terms of the broad trends investigated in this chapter only few instances raise any serious doubts about the accuracy of the published dates. More difficult to determine are the recovered quantities of pottery from different periods, as statistically informed sampling forms part of only a handful of projects. For the sake of consistency, all sites with materials from either the Chalcolithic, the Bronze or the Iron Ages have been included into the database. In cases, where more intensive surveys have excluded sites with low sherd densities from settlement counts, a slight divergence between the numbers proposed here and those discussed in published summaries may occur (e.g. Whallon 1979). These differences, however, tend to be minor and do not significantly alter overall settlement developments.

In terms of diachronic comparison, the differential lengths of cultural or political phases and the question of site contemporaneity have to be considered. Cultural and historical/political developments, according to which relative chronologies are established, do not happen in equal intervals and particularly in longer periods not all settlements are likely to have been occupied continuously and, thus, contemporaneously (Dewar 1991). As regards the corpus used in this study, EBA and IA sites are likely to be over-represented in terms of absolute site counts. The majority of surveys either do not distinguish between the main sub-phases of each of these

periods or do so only sporadically. In this manner, site numbers become lumped together over periods of up to 1,000 years. Sites will have been established and abandoned as well as resettled within these large time-spans. For this reason, overall site-counts are "weighted" by the different length of the periods represented in order to gain some control over this bias and to obtain even a very general idea of the number of sites potentially occupied at any point in time in the regions in question (Table 28). Weighted settlement numbers diverge most drastically from absolute site counts in the case of the EBA to MBA relationships. The developments between the MBA and LBA, however, remain relatively unaffected.

A final point to be made about the problems inherent in the present data set is the visual representation of results. The original survey maps reproduced in mostly preliminary publications tend to be of extremely low standard and are often little more than a badly photocopied and scanned road-map with hand-drawn dots. Few survey reports supply coordinates for a more precise re-construction of site locations (e.g. Omura 1988-2005; Mikami and Omura 1988, 1990). Annual preliminary reports often do not use continuous site-numbers and only sites from the most recent season are presented on accompanying maps. In this way, the visual summary (Map 40 to Map 45) of settlement patterns from long-term survey projects involve a certain amount of approximation of site-locations with respect to each other and topographic signature features. The site numbers on these maps are assigned according to site-size to facilitate comparison with the catalogue of LBA Anatolian settlements in Appendix 2.

To sum up, while more accurate data, specifically collected with the research questions of this study in mind, would be highly desirable, in reality, a broad, empire wide perspective such as the one envisaged here, has little methodological choice but to include a wide variety of published materials, not all of which present readily compatible sets of data. The strengths of the chosen approach, however general as it

may be, are its ability to provide a synthesis of LBA settlement dynamics on a supra regional scale and in diachronic perspective. Naturally, incorporation of a large variety of survey results from different stages of archaeological paradigm development as well as national traditions is wrought with some significant difficulties and a basic degree of bias has to be expected from the results. It is a first step towards an archaeological appreciation of the hinterlands of the Hittite empire.

5.1.3. Analytical Methodology

The analytical methodology employed in this study involved the collection of data from sites with evidence for Chalcolithic, Bronze or Iron Age occupations or a combination thereof from ca. 60 survey projects from across Turkey in a database (Appendix 2). Among other information, the recorded details include individual site names, published record numbers, site type, metric dimensions and general characteristics of location as well as periods represented. Where possible, different periodisation systems were synchronised to facilitate analysis, although this was not possible for all the surveys. As a result, not all data sets can be subjected to the same types of analyses. In the case of some sites, multiple re-visits by the same or different survey teams have produced somewhat varying chronological interpretations. These may be due to the chance of recovery of diagnostic pieces as well as different notions of chronologically significant cut-off points in the development of the ceramic repertories. Who to believe is difficult to decide without direct access to the primary data. As a general rule, the most recent revisits and those verifiable through illustrations were entered into the database.

Site dimensions tend to be published either as diameters or in the form of length and width measurements. Approximate site sizes have been calculated using simple formulae for either circles ($radius^2 \times \pi$) or ellipses ($length/2 \times width/2 \times \pi$). With the exception of Whallon (1979), site sizes are recorded as averages by most surveys and no attempts are made to document period-specific distributions of artefacts. Whallon

(1979, 262) has found that on average, period specific occupation sizes tended to be smaller than absolute settlement dimensions in all but the smallest size categories.

The spectrum of recorded site-sizes in LBA Anatolia and northern Syria ranges between below 0.1 to 180 ha. To make diachronic comparisons of settlement patterns feasible an overall classification of sites has to be established. For the present study, the range of site-sizes of the Central Anatolia survey, which is the best documented and long-running project on the central plateau, are tabulated and displayed in histograms (Figure 39 and Figure 40).

Peaks in numbers of settlements in each region and period are taken as general indications for regional and period-specific settlement tiers. According to these results, a classification of small, medium, large and major sites will be adopted in the following analysis. Table 29 compares size-ranges a) tabulated from the Central Anatolia Survey and b) from the Keban Dam Project. In both cases, a remarkable overlap of site-size distributions across periods is indicated. The differences in classification between the two survey areas may be partly due to the fact that no period-specific dimensions are available for the Central Anatolian Survey, and may suggest a need to downscale absolute site-sizes somewhat.

These classifications are proposed to broadly correspond to the settlement types of hamlets/small villages, villages, towns and major (regional) centres and their diverse functions within a state-level society. Other types of sites such as military garrisons may also fall within these site categories. Tuba Ökse (2001a, 502) has suggested a three tier LBA settlement hierarchy in the region west of the modern town of Sivas with large settlements ranging around 20 ha, medium sites around 7.5 ha and small sites or villages around 1-2 ha. This classification, although similar to that outlined in Table 29,

does not account for the large number of sites below 1 ha detected by surveys across Anatolia (154 of 647 LBA sites).

In order to begin to answer the research questions outlined in the beginning of this chapter, the data collected from both published and unpublished survey reports will be examined for regional, medium-term changes in settlement numbers, density and broad demographic trends as well as settlement continuity. Data from more comprehensively published regions will be cautiously submitted to a more detailed examination of settlement hierarchies and their transformations throughout the LBA. Techniques of spatial analysis include the visualisation of hypothetical territorial arrangements through Thiessen polygons (Boots 1986; Grant 1986) and the reconstruction of hierarchical relationships on the basis of rank-size analysis (Crumley 1976; Hodder and Orton 1976; Hodder 1979; Johnson 1980; Pearson 1980).

Potential biases in the application of such methods include the difficulties in estimating population size and administrative function from surface data (Wilkinson 1999; Bintliff and Sbonias 1999) as well as at excavated sites (Garr 1987; Postgate 1994b). A general correspondence between these factors, however, may be assumed and both a low estimate of 100 and a high estimate of 250 persons per ha will be used to highlight broad demographic trends. The reconstruction of settlement hierarchies and rank-size relationships may be compromised by the lack of boundaries of political or economic networks that are potentially located outside survey areas (e.g. Paynter 1983: 253-255) and undetected settlement categories, usually at the lower end of the site-size scale (Johnson 1987; Lyon 2000, 95-96)

5.1.4. A Framework of Interpretation

To bridge the gap between settlement data derived from field survey and expected LBA socio-political organisation and transformation, the interpretive model proposed for

this study takes account of both cross-culturally observed syncretisms in settlement systems and land-use patterns in complex state societies as well as the specific socio-cultural circumstances of LBA Anatolia and the wider Western Asian region. To gain the fullest possible picture of both regional idiosyncratic developments and the global picture of the imperial settlement system, the interpretive framework integrates LBA textual evidence on Hittite administrative and economic organisation with archaeological information from excavated sites, whose identities and functions in the Hittite period can be relatively securely established, and whose material culture remains can serve as "blue-prints" for Hittite settlements of particular administrative scopes. Due to the nature of most of the available evidence pertaining to these issues and their geographical concentration in the Hittite heartland, the model is discussed in detail in Chapter 3 as part of a broader overview of the Hittite core region.

5.2. Regional Settlement Trends In LBA Anatolia and Neighbouring Regions

A number of hypothetical expectations about the nature and intensity of imperial strategies of control and their spatial expressions have been outlined in Chapter 2. The following presentation and analysis of regional settlement trends across Anatolia and parts of northern Syria highlights transformations in regional and cross-regional settlement patterns that are suggestive of processes of territorial integration, indirect rule as well as the formation and encounter of a series of boundaries. Summaries of the results from the following regions are presented in Table 30 to Table 32.

5.2.1. Region A

5.2.1.1. Region A1

In contrast to the concentration of excavation work in Region A1, the hinterlands of LBA centres in the Hittite heartland have received comparatively little attention. Setting aside early exploration, two recent survey projects have explored the archaeological record in the modern Turkish province of Çorum and a more geographically restricted

project (Czichon 1997, 1998 and 2000) investigated the immediate surroundings of the capital city.

The latter project is the most recent and systematic of a long list of explorations in the vicinity of Boğazköy-Hattusa (references in Czichon 1997) and has shed new light on the functioning of this city and relationship with its environment. The most important, and somewhat surprising, result is the apparent absence of a lower-town, which had been expected to accommodate the large number of people necessary to build, run and supply the imperial capital. Instead, a corona (*Kranz)* of sherd-scatters of varying sizes and intensity at distances between 2 and 5 km from the city walls was recorded (Czichon 2000, 271) (Map 39). In addition to surface scatters in the magnitude of farmsteads or small village clusters, a total of seven strategically located sites, which are identified as the lookouts or outposts attested in Hittite texts, were recorded outside the monumental gate structures (Czichon 2000, 273).

The results of the Boğazköy-Hattusa survey lend support to the impression of the capital as a relatively empty, monumental administrative and ideological shell rather than a conventionally urban centre (Wirth 1997, 4), which drew its labour force from the surrounding region. Unfortunately, the preliminary reports use the problematic chronological term "Hittite" that makes it impossible to distinguish between regional developments related to the site's changing roles from the centre of a local MBA kingdom to the capital of the Hittite state and empire.

Two extensive survey projects in Çorum province have begun to shed light onto the settlement developments in the extended northern hinterland of the capital city (Süel 1990, 1991; Sipahi and Yıldırım 1998-2005; Sipahi 2003; Yıldırım and Sipahi 2002, 2004) (Map 40). In detail, the results of these projects are also difficult to evaluate due to crude chronological divisions; sites are usually only dated to the 2nd millennium BC.

In total, 49 2nd millennium sites have been recorded so far, compared to 68 EBA and 54 IA. From the 49 settlements only 13 are more closely dated to the LBA (Figure 41) (Sipahi and Yıldırım 1998-2005; Sipahi 2003; Yıldırım and Sipahi 2002, 2004). Most prominent among these is the site of Yörüklü-Hüseyindede located 45 km north-west of Boğazköy-Hattusa, which has since been partially excavated (Sipahi 2000; Yıldırım 2000). The remaining 12 sites are dated to the OH period on the basis of similarities with the Hüseyindede and İnandık material. The surveyors also insist that no Empire Period sites lie in this part of the Çorum Province (Sipahi and Yıldırım 2000, 34; 2001, 104; Yıldırım and Sipahi 2004, 310). This seems very unlikely in view of the vicinity of the capital city and may possibly be the result of difficulties in dating NCA surface pottery (see above, Chapter 4). In the light of a recently proposed lowering of the dates of LBA İnandık (Mielke 2006b), the results of the Çorum 2 survey are also likely to require future reconsideration.

The dominant LBA site in Çorum province is the capital city, Boğazköy-Hattusa, with ca. 180 ha maximum extent. About 36 km to the north-east lies Alaca Höyük, whose intra-mural settlement measured ca. 5 ha (ca. 6.7 ha in total) during the LBA. The less extensively documented LBA site of Eskiyapar also lies in this region. Of the 89 sites recorded by the survey projects in this region, 53 are published with site dimensions. The largest recorded site with 2nd millennium materials is Cırcır Tepe (ca. 9 ha), which is located around 40-50 km north of Boğazköy-Hattusa and falls into the category of "major" sites. Including the excavated site of Alaca Höyük, a total of eight "large" sites with evidence for 2nd millennium BC occupation lie in the wider northern hinterland of the capital city, four of which are more closely dated to the LBA. The largest site with specifically LBA materials is Çayhatap Höyüğü (4 ha) (Nr. 70 on Map 40). Only a small number of medium-sized sites was recorded in comparison to the 24 "small" 2nd millennium settlements.

One of the most comprehensive investigations in the southern part of Region A1 is the Alişar Regional Survey (Branting 1996). The project included an extensive reconnaissance and re-survey of sites discovered by von der Osten (1927; 1929a, b; 1930; 1933) as well as intensive field-walking within the catchment areas of larger sites and the Gelingüllü dam. Although research design and methodology were among the most advanced in Turkey, unexpected rescue work in the dam area prevented the survey from completing its original target of refining von der Osten's dating and the recording of site-dimensions needed for spatial analysis. So far, the survey is published in preliminary format only.

Intensive survey within the 2.5 km catchment of Alişar Höyük (18 ha) indicated a steady increase in total settled area from the beginning of the Chalcolithic to the Roman period with the exception of the EBA III and the Iron Ages (Figure 42), alongside the growing integration of the settlement system (Branting 1996, 151-154; Fig. 1-5). During the 2nd millennium BC, the long-standing regional supremacy of Alişar Höyük was challenged by the two secondary centres of Çadır and Salur Höyük, while all other sites fall into the lowest size-category. Branting (1996, 153) interprets this development as the result of the incorporation of the region into a larger political system. During the Iron Age, the settlement system was dominated by the 295 ha site of Kerkenes Dağ.

A survey conducted in the surroundings of Kerkenes Dağ to the north-west of the Alişar Regional Project (Summers 1995; www.kerkenes.metu.edu.tr) produced very little LBA data. Except for Taşlık Höyük, which has yield small amounts of 2nd millennium pottery, only the site of Kuşaklı Höyük (Yozgat) was intensively explored. The previously known site is strategically located along a major communication route and shows traces of a LBA fortification system and gate structure on the surface. In the past, the site has been identified with the Hittite cult centre of *Zippalanda* (Gurney 1995, 71; Gorny 1997;

for an alternative identification of Çadır Höyük with *Zippalanda* see Gorny, forthcoming).

The southern fringes of the Land of Hatti and the northern part of the Lower Land have been explored by the Central Anatolia Survey project for almost twenty years (Omura 1989-2005; Mikami and Omura 1988, 1990). The aim of the survey, alongside basic site reconnaissance, is the regional contextualisation of Kaman-Kale Höyük, the only extensively excavated site in the south-western part of Region A1 (Map 41). The site is located inside the bend of the Kızılırmak near Kaman in Kırıkkale province and has yielded substantial MBA and earlier occupation levels. A large-scale silo structure similar to those recovered at Boğazköy-Hattusa and Kuşaklı-Sarissa is dated to the OH period, while ceramic evidence and other small finds indicate a continuation of habitation into the imperial phase. Little in the form of architectural remains has been recovered from the latter period to date, partly due to both later building activities and a possible decline in the site's importance during this phase (Omura 1996b, 257; 1997, 294).

For want of a better spatial division, I have used the Kızılırmak river as a hypothetical boundary between Region A1 and A3 and settlement data were investigated from this perspective. The results of particularly the rank-size analyses of LBA settlement systems to either side of the Kızılırmak (see below) as well as a hypothetical reconstruction of territorial units (Map 46 and Map 47) seemingly support the existence of a division along the river. In terms of Hittite historical geography, the northern half of the Central Anatolia Survey region (Yozgat, Kirşehir and Kırıkkale provinces) thus corresponds to the southern fringes of the Land of Hatti. The southern and western survey area (Ankara, Konya, Aksaray, Nevşehir, Kayseri and Niğde provinces) covered the northern parts of the Lower Land (Region A3) and less well known political entities in Region C2.

At the most basic level of absolute site numbers (Figure 43), the southern part of Region A1 experienced a decline in settlements after the EBA (117 sites) by about one third in the MBA-OH (78) and diminished further during the LBA (63). When absolute site counts are divided by the lengths of each chronological period, these trends reverse somewhat. Figure 44 includes total site counts per period for which settlement dimensions are published, the aggregate settled area and population trends in each phase. Settled area, and with it population density, reduced by about two-thirds from the EBA to the MBA-OH phase, while only a minor reduction appears to have occurred between the MBA-OH and the LBA.

Although the decline in site numbers and settled area from the MBA-OH to the LBA appears not to have been dramatic, it occurred at the top of the regional settlement hierarchy (Figure 45 and Figure 46). The largest recorded site in the region is Yassı Höyük, which measures around 25 ha and may have acted as a regional centre during the MBA-OH. Most of the sherds collected from the site date to the MBA-OH (Omura 2003, 54) with no evidence for an occupation in the subsequent LBA. The two major LBA settlements in the region are Gubat Sehri (16 ha) and Yoğunhısar (9 ha), which lies adjacent to the Alişar and Çadır Höyük settlement system. No MBA materials are reported from Gubat Sehri and about half of LBA settlements classified as "large" are also new establishments of this period. In addition, the proportion of medium and large sites appears to increase from the MBA-OH to the LBA period at the expense of smaller sites.

A comparison of MBA-OH and LBA rank-size distributions further underlines the above observations. The MBA-OH distribution indicates the existence of one overbearing as well as several other large centres in the region (Figure 47), while the LBA graph shows a closer fit with the ideal log-linear distribution, indicative of a better integrated settlement system (Figure 48).

The southern part of Region A1, thus, appears to have witnessed the disintegration of the MBA regional settlement system, which was headed by Yassı Höyük, and the establishment of a new network or networks, although of a much lower magnitude, led by Gubat Sehri, and Yoğunhısar further to the east. A trend towards new foundations is also noticeable in the third settlement level, possibly indicating that new villages or small towns were established in the LBA. Taken together, the results of the Alişar Regional Project and the Central Anatolia Survey point towards significant transformations, including a downscaling of spatial and perhaps administrative and/or economic complexity, in the southern part of Region A1 during the LBA. It seems that the pre-eminence of MBA centres was either challenged or replaced by alternative, but smaller, power-bases.

5.2.1.2. Region A2

Region A2, to the east of A1, is approximately congruent with the Hittite Upper Land, and covers the modern Turkish provinces Samsun, Amasya, Tokat and Sivas. In addition to early exploration (e.g. von der Osten 1929; Meriggi 1965; Burney 1965), Region A2 has been investigated by a number of relatively recent surveys, ranging from annually conducted, extensive reconnaissance projects (Dönmez 1999-2002; Bilgi et al. 2003; Özsait 1988a-2005a; Özsait and Koçak 1996; Özsait and Dündar 1997; Özsait and Özsait 2001; Ökse 1994-2002) to less systematic and shorter-term exploration (Yakar and Dinçol 1974; Yakar and Gürsan-Salzmann 1979; Yakar 1980).

The majority of sites recorded by earlier exploration have been re-surveyed by more recent projects and are included here in their latest re-recordings and chronological interpretations. All recent survey results, however, are available only in preliminary publications and information such as site-dimensions are not consistently supplied.

The three most prominent excavated sites in Region A2 are Ortaköy-Sapinuwa, Maşat-Tapikka and Kuşaklı-Sarissa. As discussed in Chapter 3, all of these sites were extensively settled throughout the LBA and in the case of Ortaköy-Sapinuwa and Kuşaklı-Sarissa represent new foundations of the Old to Middle Hittite Period.

The region as a whole appears to have been most densely settled during the EBA (340 sites), with site numbers reducing by more than one third in the 2nd millennium (200); which divides further into 116 sites with MBA and 87 sites with LBA materials (Map 40). Site numbers more than double from the LBA to the IA (191) (Figure 49). The results of weighted site counts present a reversal of developments from the EBA to the MBA. The overall decline of settlement numbers from the MBA to the LBA, however, is somewhat amplified.

When examined individually, 2nd millennium BC settlement trends in Amasya, Tokat and Sivas provinces share basic similarities. Conversely, developments in Samsun diverge quite dramatically from those in more southerly areas. After a similar decline in settlement numbers from the EBA to the MBA, the coastal Pontic zone seemingly experienced a settlement hiatus (Figure 50). In the past, Yakar (1980, 84; 2000, 296; Yakar and Dinçol 1974), although conceding the general scarcity of durable LBA settlements in the Bafra plain, has proposed short-term LBA occupations at Alaçam-Sivritepe, Dündartepe and Kaledoruğu as well as a line of Hittite outposts along the Samsun-Kavak road (Bağ Tepe, Dedeüstü Tepesi, Kavak, Kaleyeri Tepesi and Çamlık). More recent survey efforts and the analysis of older surface samples have led Dönmez (2002) to strongly question the presence of LBA occupation at these settlements. Perhaps it should be stressed here again that in the relevant publication by Dönmez (2002), the MBA label unconventionally includes the OH period, suggesting that settlement in this area ceased sometime during/after the MBA - early LBA, which, idiosyncratic periodisations apart (Schoop, forthcoming also remarks on this), would

not be entirely incorrect in terms of the ceramic chronology. This classification pushes the apparent abandonment of coastal settlements into the middle-later part of the LBA, which in turn does fit rather well with the textual record (e.g. Klinger 2002).

According to the most recent archaeological investigations in Region A2, only four sites in the Samsun region yielded materials from the later part of the LBA (Dönmez 2002) (Map 40). These are Sivritepe, Sarıgazel, Yük Tepe-Salur and Oymaağaç Höyük (Höyük Tepe), which are all located in the southern hinterland, away from the Black Sea coast. Oymaağaç Höyük, which shows traces of monumental architecture including a possible postern gate, has been identified with the Hittite cult city of Nerik by some scholars (Forlanini 1986; Macqueen 1980, 81). Assuming the correctness of Dönmez's (2002) propositions, these sites appear to represent the northern fringe of currently recognisable LBA settlement.

The area to the south, by contrast, is much more abundantly settled. A total of 57 2nd millennium sites have so far been recorded and published mostly by Özsait from his annual exploration in Amasya and surrounding provinces. Of the 57 2nd millennium sites 23 are further identified as having MBA occupations and 17 date to the LBA (Figure 51). Only few sites are more specifically dated to either the OH or imperial phases. The largest recorded site with MBA and LBA evidence is Oluz Höyük (5.9 ha) followed by Doğantepe (4.7 ha), Gediksaray (4.1 ha).

Tokat province, further to the south, has received less long-term attention as regards archaeological surveys. From the limited evidence available, the two major sites in Tokat province during the LBA appear to have been Maşat Höyük (ca. 8 ha) and Aktepe (Bolus) (ca. 12.5 ha) (Özgüç 1978, 103-105; 1982, 141-143) (Figure 52).

Settlement trends in Sivas province (Figure 53) resemble those of Amasya, with a peak in absolute numbers during the EBA (126 sites) and a decline of settlements in the MBA (52) by more than half, followed by a slight increase in the LBA (58). West of the modern town of Sivas, Ökse (2000a, 2001a) has convincingly reconstructed a LBA settlement system centred round the major sites of Kayalıpınar (20 ha) and Kalkankaya (24 ha) as well as the smaller Sur Tepesi (10 ha) and Geredekkaya (7 ha). Two additional major LBA sites, Kuşaklı (18 ha) and Asağı Kalaca (26), are located further to the south. At Asağı Kalaca and Sur Tepesi no MBA evidence was apparently collected, while recent excavations at Kuşaklı (Müller-Karpe 2003, 386-387) confirmed the absence of earlier, pre-LBA occupation levels.

Settlement continuity between the EBA and the MBA in Region A2 as a whole is comparatively high with around 80% of MBA sites showing signs of EBA habitation. In contrast, only about half of LBA sites occupied locations settled in the preceding period (Figure 54). In detail (Figure 55), most LBA sites recorded in the Amasya province (94%) are published as having had MBA predecessors, including the largest surveyed site of Oluz Höyük. Only when the more precisely dated sites are taken into account do we find a possible hint at discontinuity in settlement locations during the LBA. In Sivas and Samsun, 79% and 96% of MBA sites respectively occupied sites with EBA evidence, while only 48% and 75% of LBA sites were already settled in the MBA.

Characteristic developments in Region A2, thus, include the apparent displacement of settlements with recognisable NCA material culture traits from the Black Sea coast to the interior of the Samsun province. Only to the south of this line do we encounter a comparatively widespread LBA settlement pattern, with regional centres developing in Tokat and Sivas. Several sites, particularly large and major settlements, are either new establishments of the LBA or clearly flourish in this period. This includes the site of Kayalıpınar, which, if correctly identified as *Samuha,* capital of the Upper Land (Müller-

Karpe 2000, 364), was of sub-regional importance as the seat of an Assyrian *warbatum* during the MBA (Ökse 2000a, 89).

5.2.1.3. Region A3

Early reconnaissance surveys in Region A3, the southern Anatolian plateau, were conducted by Mellaart (1959; 1958) and Tezcan (1958) often single-handedly and on foot. Mellaart (1958, 311), for instance, proposed that around 200 to 250 mounds populate the southern Konya Plain, with the majority occupied during the EBA:

> Middle Bronze Age sites numbered about 25, but sites with Late Bronze Age material were scarce. Not more than 20 sites, of which at least six are doubtful, can be assigned to this period.
> (Mellaart cf. Mellink 1960, 61)

With a focus on the Çumra region of the Konya plain, French, explicitly aware of the biases inherent in extensive survey methodologies, also reported an apparent decrease in settlement numbers from a total of 35 sites with 3rd millennium materials to only seven mounds with pottery from the 2nd millennium BC (French 1970, 142). One 2nd millennium site seems to have been a new foundation.

Excavations on prominent mounds on the southern plateau such as Acemhöyük (Mellink 1965, 138; 1966, 146; 1969, 207-208; 1970, 162; 1971, 165; 1972, 170;) and Karahöyük-Konya (Mellink 1958, 95-96; 1959, 77; 1960, 61; 1962, 75; 1963, 67; 1964, 153-153) have yielded only MBA occupation levels. The only excavated site with LBA occupation on the southern plateau is Porsuk on the northern approach to the Cilician Gates (Pelon 1970; 1971; 1992; Beyer et al. 2004; Beyer 2006). Echoing settlement trends in the rest of Region A, Porsuk (6.3 ha) was founded in the LBA.

Since the mid 1980s, the northern part of the Konya plain, especially around the salt lake, has been explored by the Central Anatolia Survey project (Map 41). The results

indicate a decline in settlement numbers by more than one third from the EBA (190) to the MBA-OH (120), while site counts increase somewhat in the following LBA (122).

Figure 57 presents the total site numbers per period for which settlement dimensions are published and the aggregate settled area occupied in each period, as well as general indicators of demographic trends. The overall decline in absolute settlement numbers during the 2nd millennium BC corresponds to a drop in total settled area, notably during the LBA, which may be associated with a decline in overall population density in the region during this phase.

As was the case with Region A1, the loss of settled area/population from the MBA to the LBA affected the highest rank of the local settlement hierarchy (Figure 58). During the MBA, the area to the south of the Salt Lake was dominated by the 44 ha site of Acemhöyük, which excavations have shown to have accommodated a palace structure alongside evidence for the site's participation in the Old Assyrian merchant networks. Acemhöyük has in the past been equated with the Purushattum of MBA texts, which was the capital of a regional kingdom (Bryce 1998, Map 3; Klengel 1999, Karte 3; see Kuhrt 1995 for an equation of Purushattum with Karahöyük-Konya). Located to the north of Acemhöyük, close to the shore of the Salt Lake, lies the second largest site of Varavan (20 ha). In the LBA, Acemhöyük is no longer occupied in any significant manner and the regional settlement hierarchy between the Salt Lake and the Kızılırmak was apparently headed by Varavan. The largest site with LBA materials to the west of the Salt Lake is Höyük-Altılar (18 ha) together with Azak Kalesi (11 ha), although the latter site seems mostly occupied during the Roman and Byzantine periods. Both Höyük-Altılar and Azak Kalesi do not appear to have been settled during the MBA. In addition, 15 of the 29 sites recorded in the "large" category appear to have been newly established in the LBA. In total, 38% of LBA sites in this area show no indication of MBA occupation (Figure 59). The preliminary survey publications allude to

a possible abandonment and subsequent short-term re-settlement of this area during the latest phase of the LBA (Omura 2000b, 28; 2001b).

The rank-size distributions for the MBA and LBA in Region A3 indicate a trend towards increasing regional integration, with an almost log-linear distribution of LBA sites (Figure 61). The MBA graph (Figure 60) too follows relatively closely the ideal type of an integrated system. In the category of large and medium sites, however, the MBA distribution is somewhat concave and irregular, indicating the overbearance of, and competition between, the two dominant centres in the region.

A regionally more dispersed survey has been conducted by Bahar since 1994 (Bahar 1996-2005; Bahar, Karauğuz and Koçak 1996; Bahar and Koçak 2004) in parts of the Konya and Karaman provinces, which equate generally with Region A3, although some of the areas investigated fall into Regions C2 and E. Broad chronological subdivisions and a lack of consistent site-size information, however, are major obstacles in the appreciation of the results of this survey. In a series of summary tables, Bahar presents the distribution of overall site numbers per period with more fine-grained chronological divisions (Bahar 2002a, 263-265; Bahar and Koçak 2004 Tablo D: 7) (Figure 62), suggestive of an overall increase in settlement numbers during the 2nd millennium BC with a peak in the LBA.

In Konya Province in particular, ten major sites with 2nd millennium occupation warrant further attention. The largest recorded LBA site is Sulutaş in the foot-hills of the Takkeli Dağ. It measures around 47 ha and may have presented a regional centre in the range of Acem or Karahöyük and that may well have replaced the latter site in the LBA settlement hierarchy of the Konya Plain. Another 20 ha site (Kökez Höyük) is located to the north-west of Konya near Kadınhanı.

Other recent survey projects have concentrated on the provinces of Aksaray, Nevşehir and Niğde (Sever et al. 1992; Esin, Gülçur and Kurar 1998; Esin, Gülçur and Özel 1999; Gülçur 1995-2003; Şenyurt 1999, 2000, 2003). Only a hand-full of 2nd millennium BC sites have been identified and published so far by these projects.

The Çarşamba alluvial fan and an adjacent area to the west, which encompasses the hilly fringes of the Konya plain and the May alluvial fan, were the subject of intensive field-survey between 1995 and 2001 (Baird 1996-2002). According to preliminary summaries, the 3rd millennium BC on the southern Konya plain saw a marked increase in settlement numbers and aggregate site area alongside the development of a hierarchical rank-size organisation indicative of urbanism. On the contrary, settlement numbers are described as sharply decreasing during the 2nd millennium, only to reach EBA densities again during the IA. A settlement increase, however, occurred between the MBA (17 sites) and the LBA (22 sites), which in spatial terms sees an increase from 118 ha of MBA occupation to 144.5 ha in the LBA (Baird personal communication 7 January 2006; 12 April 2006). Baird attributes the depletion of the Çarşamba area in the 2nd millennium BC, among other factors, to the attraction of sites such as Karahöyük near Konya, which grew in size during the MBA (to ca. 39 ha). In this period, the majority of the population appears to have lived in larger centres and surrounding medium sized sites. Possible explanations are political organisation as well as security and/or economic considerations related to the Old Assyrian trade network (Baird 2001, 16).

Similar to the results obtained from the data of the Central Anatolia Survey, the southern plain too appears to have experienced a certain degree of settlement discontinuity between the MBA and LBA. While MBA centres are reported to have been located to the west of the Çarşamba fan, large and major LBA sites are situated in the southwest and east of the survey region. Smaller sites become more widely

distributed than in the preceding period (Baird 2001, 16). Further chronological fine-tuning suggests another phase of settlement discontinuity during the LBA. Several new sites, including a major regional centre (33 ha), appear to have been founded in the imperial phase (Baird 2002, 19; personal communication 7 January 2006).

The last area fringing the inner core region of the Hittite empire (A1) remaining to be discussed is the mountainous zone lining the shores of the Black Sea. As will be outlined in the following section, two broad settlement trends characterise Region B during the 2nd millennium BC, both of which are distinctly unlike those observed for the central and south-central plateau.

5.2.2. Region B

5.2.2.1. Region B1

Beginning with the north-east, an apparent settlement hiatus sometime during or shortly after the MBA in coastal Samsun has already been touched upon (Region A2 above). The same phenomenon appears to have affected settlement patterns in the Sinop province, where Işin (1998), for instance, located a total of 41 sites with EBA materials, followed by eight with MBA evidence and no sites at all with conclusive LBA ceramics.

Although there is some disagreement as to the exact numbers (see Region A2 above; Dönmez 2002, 275; Yakar 1980; Yakar and Dinçol 1974), only a handful of sites located in the inner Pontic zone of Samsun province appear to have supported larger-scale, permanent occupations during the LBA. In addition, excavations at İkiztepe in the Bafra plain have yielded flourishing EBA and MBA settlements and strong central Anatolian connections in the latter phase (Müller-Karpe V. 2001), but no evidence for permanent LBA occupation. Rainer Czichon has also begun regional investigations

around the site of Oymaağaç in 2005, which should provide a more clear-cut archaeological profile of the region in the coming years.

A short preliminary discussion of an extensive reconnaissance survey conducted in the Gökirmak valley (Donceel-Voûte 1979) mentions one site with possible LBA materials (Urgancı-Taşköprü). All other 2nd millennium sites appear to date to the MBA.

Further to the west, a more systematic and intensive survey project explored the region around Kastamonu between 1995 and 1997, but with similar results (Marro, Özdoğan and Tibet 1996, 1998; Kuzucuoğlu et al. 1997; Marro 2000). Although the term "Hittite" is used in the preliminary reports for the later MBA and LBA sequence, the published pottery suggests a date early in the sequence for the majority of the eight sites with 2nd millennium materials. Characteristic shapes are, for instance, red slipped and polished pointed horizontal handles and beak-spouts (Marro, Özdoğan and Tibet 1996, 283, Fig.9), which fall into the early part of the ceramic sequence (MBA-OH). Typical LBA shapes are rare in the published Kastamonu material. Exceptions to this are the sites of Höyükdoruğu, Kayabaşı and possibly Üyüktepe (Nos. 648-650 on Map 40). None of the Kastamonu sites, however, appears to have material characteristic of the second part of the LBA.

To the south and west of Kastamonu province, the results of Project Paphlagonia (Matthews, Pollard and Ramage 1998; Matthews 2000a, b; Schachner, unpublished manuscript) provide insights into rather different settlement trajectories in Çankırı and parts of Karabük provinces. A first-hand study of the material from Project Paphlagonia at Çankırı museum in April 2005, allowed me to establish chronological subdivisions in line with current research at excavated sites in the Hittite core-region (see Chapter 4) and to have better control over the selection of sites included in the settlement analysis.

Three extensive and two intensive field seasons in inner Paphlagonia yielded a total of 27 sites with conclusive 2nd millennium evidence (Map 40 and Figure 63). These include two cemeteries mostly dating to the EBA, two small sherd-scatters, one of which (Nr. 422 on Map 40) appears to have served as a strategic lookout position, and 23 2nd millennium BC settlement locations. Of these, 14 sites yielded pottery typical of the first part of the ceramic sequence (MBA-OH). Pottery falling into the OH to early Empire sequence are present at 21 settlements, and 12 (2 of which are not entirely secure) sites have yielded ceramic evidence indicative of the last ceramic phase or the later imperial period; amounting to 22 sites with LBA material.

The region of inner Paphlagonia experienced a 38% increase (eight new sites in the OH period) in settlement numbers from the MBA to the first half of the LBA. Strong continuity in settlement locations is remarkable throughout the 2nd millennium. Only one MBA settlement (medium sized) ceases to be occupied in the early part of the LBA. Seven small and one medium sized settlement are apparently LBA establishments, although some more generic 2nd millennium forms are also present at these sites. Ceramic characteristics typical of the last LBA phase can be found at 12 sites. With the exception of a possible new foundation of a medium sized settlement (Nr. 168), smaller sites and the 6.4 ha regional centre of Maltepe yielded positive evidence for late imperial occupation.

The main MBA and LBA settlements in Paphlagonia are strategically located on major communication routes and/or in defensible locations as well as amidst pockets of fertile arable land on small plains and river valleys and near natural resources (Matthews 2000a, b). Altogether six sites with 2nd millennium occupation show evidence of substantial defensive architecture (Nos. 81, 197, 198, 204, 262 and 367). The spatial arrangement of fortified sites is clearly linear and follows the main east-west communication route of the Devrez Valley. The only exception is the fortified LBA site

of İnceboğaz, which controls a much more northerly territory and which appears to have been occupied throughout the MBA and LBA, including the final imperial phase. Three (Nos. 81, 198, 367) of the six fortified sites did not yield definitive evidence for a continued occupation into the late Empire Period.

North of this apparent line of defence lies the rugged mountainous territory of the Ilgaz range, which has yielded no 2nd millennium settlements, even though sites of other periods were found. To the south, settlement assumed a much more widespread pattern. The largest 2nd millennium settlement in the Paphlagonia hierarchy, the mound of Maltepe (6.4 ha), is located in this area. The second largest is the fortified flat site of Dumnalı (3.3 ha) on the Devrez defence line. Small and medium settlements are scattered around the larger sites in the southern part of the survey area.

In summary, the LBA data from the northern fringes of the central Anatolian plateau point towards a dichotomy in settlement trends between coastal and inland zones in the form of an abandonment and inland retreat of sites with NCA cultural affinities on the one hand, and of the strengthening and increasing investment in the fortification of the limits of this withdrawal on the other. Both processes appear to have occurred sometime before or during the early part of the LBA, although especially the fortified sites in inner Paphlagonia already show evidence of earlier, MBA, occupation.

5.2.2.2. Region B2

Region B2 to the north-east and east of Region A2, appears to have undergone a comparable development to Region B1 in the 2nd millennium BC. Already von der Osten (cf. Yakar 1992, 511) reported a string of what he identified as Roman forts along the Kelkit Çay and remarked on the absence of prehistoric settlement beyond this line. These results were confirmed by later visits by Kökten and Alkım the latter of whom concluded that 2nd millennium settlement was restricted to the south of the Kelkit

(Yakar 1992). Several survey seasons conducted by Özsait (Özsait 1989a-1995a) in the Ordu-Mesudiye region further corroborate the absence of MBA and LBA sites north of the river.

In association with the results of excavations at Sos and Büyüktepe Höyük, the Bayburt and Erzurum Surveys (Sagona 1999; Sagona and Sagona 2001; 2004) shed a more nuanced light on 2nd millennium BC settlement trends in Region B2. While most of the recorded sites date either to the EBA, the IA or later periods, altogether 29 settlements (15 flat and 14 mound sites) yielded MBA materials in the Bayburt region (Sagona and Sagona 2004, 239-240). In the LBA, site counts dropped to 11 settlements (three flat sites and eight mounds) (Sagona and Sagona 2004, 240-241). Two 2nd millennium BC sites, Karavelet (ES 38) and Kaylık Tepe (ES 42), were recorded in Erzurum (Sagona and Sagona 2001; Sagona 1999). The Erzincan and Erzurum survey by Ceylan (2000-2005) appears to have located only few 2nd millennium sites. Among these are Alaca Höyük (Tilkitepe II) and Pulur, while more than 30 EBA and around 60 IA sites were recorded.

Based on the results of Güneri's (1988) investigation of the Erzurum plain, which identified potential 2nd millennium BC pottery in the form of the so-called Küme-B-1 ware at Bulamaç Höyük, Yakar (1992, 512-513) has proposed an ethnic identification of this pottery with the Azzi-Hayasa (see Chapter 3). Reasons for this identification are the proposed similarities between the NCA tradition and the hand-made Küme-B ware, which is found at sites between Erzurum and Hasankale including Sos Höyük and Eskişehir Tepe. In the light of the limited evidence on which this proposition rests and the amply discussed inappropriateness of simple correlations of material culture with ethnic groups (Kramer 1977), it warrants no further discussion until much more detailed evidence becomes available.

Although it is not possible as yet to identify, in material culture terms, the LBA populations of Region B2 mentioned in LBA texts, rather clear overall trends are perceptible in survey and excavation records. On the one hand, the eastern limits of the NCA cultural zone and, quite possibly, the directly controlled political sphere seemingly emerge along the course of the Kelkit Çay. On the other hand, the apparent drop in LBA sites, the ephemeral nature of settlement at Sos and Büyüktepe Höyük as well as the appearance of large-scale burial displays (also Yakar 1992, 511) suggests a rather more mobile life-style for the occupants of Region B2.

5.2.3. Region C

To the west of the Hittite core region, cultural and territorial boundaries, although recognisable, are far less clear-cut. West-central Anatolia presents the fringe of the LBA NCA cultural region (most recently Seeher 2005, 39-40). In territorial and symbolic terms, a series of rock-monuments present clear structuring elements in the interaction between the central plateau with this transitional landscape and its inhabitants (Chapter 6).

5.2.3.1. Region C1

Region C1 denotes the northern half of west-central Anatolia, approximately equivalent with IA Phrygia (Map 40). The Central Anatolia Survey (see Regions A1 and A3 above), despite its main focus around the Salt Lake, has also explored more northerly areas in the vicinity of Ankara and Polatlı. General settlement developments in this area conform to a pattern of a peak in settlement during the EBA, followed by a continuous decline of absolute settlement numbers throughout the 2nd millennium BC. In contrast to regions to the south, the northern parts of the Ankara province are characterised by a stronger settlement continuity from the MBA-OH to the LBA. The three largest settlements recorded for both the MBA-OH and the LBA range between 4

and 5 ha and lie south of Ankara in the Polatlı and Bala districts. The site of Bitik (Özgüç 1957) with 2.7 ha presents the largest recorded site to the north of Ankara.

The results of a recent survey conducted in the surroundings of Gordion (Kealhofer 2005) suggest a very different overall settlement trend. Rather than in the EBA, settlement in the valley systems around Gordion appears to have peaked for the first time during the MBA (11), after which site numbers decline. Although absolute counts do not appear to fall dramatically, from 11 MBA to ten LBA sites, sherd densities in the latter period diminish by 50%. A proposed interpretation by Kealhofer (2005, 147-148) is that Hittite power, while enhancing Gordion itself, depleted the countryside of its smaller and medium sized villages. On average, however, settlement sizes seem larger in the Gordion region than elsewhere in north Anatolia, even if, as the sherd densities imply, site dimensions need not equate with actual settlement size.

An extensive survey of the northern and north-western fringes of the central plateau and the Pontic region was conducted single-handedly by Burney in the 1950s (Burney 1956) with the conclusion that pre-classical occupation was densest in the plain of Eskişehir. As elsewhere in Anatolia, Chalcolithic/EBA sites were most numerous (20), while 2nd millennium sites (11) seemed on average to be larger than EBA mounds (Burney 1956, 181).

This trend has been confirmed by a recent survey between Eskişehir and Kütühaya (Efe 1990-1997). Settlement numbers seem to drop quite dramatically from 159 EBA to 85 2nd millennium sites (Figure 64 and Figure 65). Efe (1997, 223) also points out that some of the 2nd millennium sites are "larger than average" (cf. Seeher 2005, 40). Unfortunately, the preliminary publications by Efe employ rather coarse chronological subdivisions and only few sites are more precisely dated, making an independent re-analysis impossible. Discontinuity from the EBA to the 2nd millennium BC affected the

largest site recorded by the survey (Karahöyük – 16 ha) as well as a number of other centres. The largest 2nd millennium settlement, at least from the result presented in preliminary publications, is Hacikebir (14.5 ha), while the largest specifically identified LBA site measures only about 5 ha (Nr. 57 on Map 42). One of the major settlements in the Eskişehir plain is Şarhöyük-Dorylaion, from where a NCA hieroglyphic seal impression as well as "Hittite" pottery has been reported (Darga and Starke 2003).

5.2.3.2. Region C2

The region to the south of Eskişehir Province, here labelled Region C2 suffers from similar archaeological limitations and only very general trends may be established (Map 42). The survey conducted by Bahar (see Region A3 above) identified a number of large-scale 2nd millennium sites and a general settlement increase on the fringes of the central plateau during the LBA (Map 41 and Map 42), including Area 5 between Beyşehir and Seydişehir.

The Isparta and Burdur survey conducted annually from 1983 by Özsait (1985-2005b; Özsait and Şahin 1996) overlaps with the more westerly exploration of surveys otherwise centred on the Konya plain. In terms of LBA historical geography, the area around Isparta and Burdur was part of more westerly, and at times hostile, political entities (see Chapter 3). Notwithstanding about two decades of survey effort, only a very limited number of 2nd millennium BC settlements appear so far to have been identified. Of a total of 111 published sites with either CHA, BA or IA occupation, only 18 date to the 2nd millennium BC. Of these, ten sites date to the MBA and only three to the LBA. Among the possible explanations for this pattern are a focus on prehistoric periods as well as the lack of excavated sites in the area. The adoption of a more mobile life-style by the local population offers an alternative explanation, which may be linked with the development of contested political borders and/or difficult security situations, perhaps not unlike those to the north.

5.2.4. Region D

Region D encompasses the broad area of Western Anatolia from the Aegean Coast to the foothills of the central plateau. Several LBA cultural traditions intersect in this area and according to the textual sources, important political developments from the break-up of native political coalitions to the incorporation of their constituent parts into the Hittite empire took place in Western Anatolia (e.g. Heinhold-Krahmer 1977; Chapter 3). The reconstruction of 2nd millennium settlement trends, however, is difficult due to the scarcity of archaeological survey projects and limitations posed by coarse chronological resolutions.

Excavated LBA sites in the region include Troy and Beycesultan as well as Miletus, Liman and Panaztepe, of which only the first two sites are extensively published. Troy (27 ha – with lower city - or ca. 5 ha citadel - Korfmann 2001, 348-349; see Hertel and Kolb 2003; Easton et al. 2002; Ulf 2003 for the site-size debate) and Beycesultan (ca. 17-18 ha) appear to have been regional centres, albeit of different magnitudes.

The most recent and comprehensively published survey in north-west Anatolia was conducted by French (1967, 1969) in the 1960s, with previous visits to the area by, for instance, Mellaart, Bittel, Burney and Kökten (French 1967, 49 for references). Although French's exploration established important settlement locations and ceramic interrelations for this, otherwise little explored, part of north-west Anatolia, its results are of only limited use for the present purpose, due to crude chronological resolution and extensive methodology.

The general picture emerging from the areas between İznik and İnegöl (French 1967) as well as those around Balıkesir, Akhisar and Manisa mirrors general settlement trends across Anatolia, with a settlement peak during the EBA followed by a decrease

during the 2nd millennium BC. With the exception of two sites, all surveyed 2nd millennium settlements have EBA predecessors. The largest recorded 2nd millennium site (İnegöl II) measures 12.6 ha and is located in the İznik area.

The Marmara region was investigated by Özdoğan (1993) during the 1980s, with a focus mostly on the EBA. The early part of this period represents a peak in settlement in the Anatolian part of the Marmara area with more than 40 recorded settlements. The later part of the EBA already marks the beginning of a settlement decline, which perpetuated itself during the 2nd millennium BC. Özdoğan (1993, 157) points towards an increase in the settlement area of a number of "city mounds" in the latter phase (also Seeher 2005, 40); which were surrounded by smaller, sometimes flat, sites in the range of farmsteads or villages.

A recent survey of the Troad (Rüstem and Bieg 2003) located 27 sites with second millennium BC occupation evidence. Problems of chronological fine-tuning due to the long time-span of Troy VI pottery echoes the difficulties faced by survey projects across Anatolia and northern Syria. The identified sites, with the exception of a 6 ha site contemporary with Troy VIIa range below 2 ha and about 44% appear not to have been occupied in the EBA.

General distribution patterns of MBA and LBA settlements are published as part of the Beycesultan publications (Lloyd and Mellaart 1965; Mellaart and Murray 1995). From these, a decline in settlement numbers during the 2nd millennium can be tentatively established. Total counts fall from 131 MBA settlements (Lloyd and Mellaart 1965, 76-77) located within the triangle of Eskişehir, Beycesultan and Pisidia to 77 sites with Beycesultan III-II materials (Mellaart and Murray 1995, 101). Only 48 settlements with evidence for occupation during the LBA II phase are listed. The majority of these share similarities with the Beycesultan I assemblages (LBA II), although thirteen sites are

listed as belonging to the north-west Anatolian tradition of the same phase (Mellaart and Murray 1995, 102).

Overall, a decline in absolute settlement numbers from the EBA to the 2nd millennium BC seems to have affected the western regions of Anatolia, with tentative evidence for an increase in the site-sizes of remaining centres. Major excavated sites such as Troy and Beycesultan point towards cultural continuity from the MBA to the LBA, but only the former site seemingly increased its political scope.

5.2.5. Region E

During the LBA, Region E was occupied by the political entity of Hulaya/Tarhuntassa (Hawkins 1995). Like all LBA polities, the extent of Tarhuntassa fluctuated throughout this period and may at times have included the southern stretches of the Konya Plain (Region A3). Consequently, the results of Mellaart's (1958) South Anatolia Survey, the Konya Plain Survey (Baird 1996-2002) and Areas 6 and 7 of Bahar's (2002) investigations may be counted either within the Lower Land or the northern fringes of Tarhuntassa. Monumental statements of power over the southern Konya plain by rulers other than those of the main branch of the Hattusa dynasty are attested at Hatip, Kızıl and Karadağ, although only the first is of secure LBA date (see Chapter 6).

Despite the strategic importance of the Göksu valley and the coastal area to its south (Map 43), it has received comparatively limited archaeological attention. Four 2nd millennium BC sites including Kilise Tepe (Maltepe), Terikköy, Silifke and Tümükkale were recorded by Mellaart in the course of his exploration in southern Anatolia (Mellaart 1958). The same sites were revisited by French (1965) and two new added. Of the ten settlements discussed by French (1965), six yielded 2nd millennium pottery. On the basis of ceramic illustrations and fabric descriptions, I have further divided the sites into likely MBA and LBA occupations, which indicate a slight increase of

settlement in the LBA (6) from the pervious period (4) along the course of the modern road from where the survey was mostly conducted.

Recent excavations at Kilise Tepe (Maltepe) have yielded substantial 2nd millennium occupation levels with material culture links to the NCA plateau during the LBA, in terms of ceramic evidence as well as central Anatolian administrative technology (see Chapter 4 and 6) (Symington 2001; Postgate 2005, forthcoming). With less than 1 ha, the site is comparatively small but a carefully chosen defensible position on a natural promontory underlines its role in the controlling of communication between the Mediterranean and the south-western plateau (Postgate 1998, 128).

The upper Göksu valley between Mut and Karaman is currently being re-investigated by the Göksu Archaeological Project (Elton 2004 26-28; 2003 28-30). The ceramic material from the first seasons is still in the process of analysis but there appears to be no LBA evidence so far (Elton personal communication March/April 2005). The western part of Rough Cilicia too has been under archaeological investigation since 1996 and fieldwork is still ongoing (http://pasture.ecn.purdue.edu/~rauhn/). However, the main focus of archaeological work is on later periods.

5.2.6. Region F

The area of LBA Kizzuwatna lies to the east of Region E and is connected to it by a stretch of narrow coastal plain running south of the Taurus range. The only passage from the central plateau leads via the Cilician Gates. As in the neighbouring region, archaeological surface survey has been relatively limited. The only comprehensively published, pre-classical survey conducted in Cilicia (Map 43) was carried out by Seton-Williams in the summer of 1951 (Seton-Williams 1954). The results of this survey indicate a dramatic increase in site numbers from the MBA (38 sites) to the LBA (65) (Figure 66), as well as a strong element of settlement continuity.

It has been pointed out that settlement increases unevenly across the Cilician plain during the LBA, concentrating on the north-eastern part (Yakar 2001, 41). Yakar (2001, 41-43) attributes this pattern to the effects of the region's integration into the Hittite empire and as indicative of an imperial settlement policy. In addition to the centres of Mersin and Tarsus, he proposes a further two sites, Sirkeli and Yılanıkilise, along the important communication route of the Ceyhan river as major centres. The original survey by Seton-Williams (1954), however, supplies no site-dimensions for these settlements and recent investigations at Sirkeli have not yielded any substantial LBA occupation levels (Ehringhaus 1997, 1999; Hrouda 1999). It is along the major communication routes of the Ceyhan and Seyhan rivers with the north-eastern plateau, that we find a concentration of monumental rock sculptures of Hittite great kings as well as local agents in the imperial phase (Chapter 6).

Özgen and Gates (1992; unpublished manuscript) conducted a more recent archaeological survey in the coastal area of Cilicia between Yumurtalık and İskenderun. The survey covered pockets of territory left out by Seton-Williams (1954) as well as some areas that had been previously visited. Altogether 23 sites were recorded, 17 of them new discoveries. Özgen and Gates (1992) challenged the results of the earlier survey in the eastern Ceyhan Plain as their findings suggest a much more populated IA landscape than previously proposed. However, few sites are discussed in any detail in the survey report and only limited information can be drawn from this study with the exception of the caution it recommends in the acceptance of Seton-Williams' dating.

Two major 2nd millennium BC centres, Yumuktepe/Mersin (Garstang 1953; Sevin and Köroğlu 2004) and Gözlu Kule-Tarsus (Goldman 1956), were excavated in the middle of the last century. Both sites have yielded LBA monumental architecture reminiscent of central Anatolian types and their LBA ceramic repertories share NCA affinities.

Mersin and Tarsus (both ca. 7 ha) clearly functioned as regional centres during the LBA. Both sites are occupied in the preceding period. To the east, Kinet Höyük is a harbour settlement located in the bay of İskenderun and ongoing excavations at the 3.3 ha site has yielded several 2nd millennium BC occupation levels and possibly a building of "official" character in the earlier part of the LBA (Gates 2001).

Tentatively observed trends in this region indicate an increase in settlement numbers during the LBA. Regional centres show continuity from the previous period, although Yılanıkilise, a site suggested by Yakar (2001) to have function as such a centre during the LBA, seems to be a new establishment of this period.

Recent surveys have also been conducted in the eastern foothills of the Taurus mountains, an area where interregional communication routes converged in antiquity. The Kahramanmaraş valley serves as a link between Anatolia, the Mediterranean and Mesopotamia but until recently has been virtually unknown to archaeology. In 1993 Carter (1995, 1996; Carter et al. 1999) started to explore this important region. Of the 127 sites identified by the survey, 34 yielded EBA materials while 36 were tentatively assigned a MBA-LBA date with a general trend of declining site sizes as well as numbers in some parts of the survey region (Carter 1996, 297). IA pottery occurred at 22 sites.

Similar chronological difficulties are faced by the Oylum Regional Project (Özgen, Helwing, Engin 2002-2004; Özgen et al. 2003), which has been exploring the modern Turkish province of Kilis since 2000, following on from earlier exploration by Alkım (1969), Archi, Pecorella and Salvini (1971) and Özgen (1986). If insecurely dated sites are discounted, the area appears to have witnessed a gradual decline in settlement density during the 2nd millennium, followed by a slight recovery in the IA. If, however, possible identifications are included in the analysis, a picture of long-term stability

arises (Figure 67). Site continuity is comparatively high with 86% of MBA and 92% of LBA sites being occupied in the respective preceding periods. The dominant settlement in the region as well as south-east Anatolia is Oylum Höyük (17 ha) (Özgen and Helwing 2003). Ongoing excavations have brought to light large-scale architecture of MBA II and LBA date as well as evidence for extensive inter-regional contacts in all directions (Özgen and Helwing 2003, 74-75).

5.2.7. Region G

Early archaeological reconnaissance work in the wider region of eastern and south-eastern Turkey was conducted by Burney (see Russell 1980) and Meriggi (1965) and Yakar and Gürsan-Salzmann (1979) explored the area connecting the central plateau with the eastern Anatolian plains.

5.2.7.1. Region G1

While the area around the modern town of Sivas was part of the Hittite Upper Land, the south-eastern part of Yakar and Gürsan-Salzmann's (1979) survey region may be broadly equated with the toponyms of Tegarama and Kummana of Hittite texts. The relatively few references in the textual sources to these incorporated, but occasionally rebellious, political entities is matched by the comparative scarcity of archaeological information from the southern Sivas and northern Malatya provinces. Of the 37 sites recorded between Malatya and Alacahan, nine settlements are published as having 2nd millennium BC materials (Table 33). For two of these, site-plans are available, suggesting rather small sized settlements in the Malatya hinterland (Fethiye ca. 0.5 ha and Bahçedamı, Kala Tepe, ca 0.1 ha). A recently begun survey to the west and south of Malatya (Di Noccera 2005) has yet to yield chronologically fine-grained results.

5.2.7.2. Region G2

Dam construction along the Euphrates and Tigris rivers from the 1960s onwards prompted a large number of archaeological rescue projects both in Turkey and

northern Syria. Several surveys, which were mostly conducted for the purpose of recording sites which would later be earmarked for excavation, have produced comparatively detailed data that can be used for a more in depth analysis of LBA settlement developments in the Elâzığ, Malatya and some parts of Tunceli province (Seradoğlu 1977; Özdoğan 1977; Whallon 1979; Whallon and Kantman 1970) (Map 44).

Site counts in the region as a whole indicate a decline in settlement density from the EBA (81) to the MBA (42), followed by a continuous increase in settlement numbers during the LBA and the IA. Figure 68 shows total site numbers per period for which settlement dimensions are published and the aggregate site area occupied in each period. From these it would seem that the region experienced a slight drop in settled area during the early part of the 2nd millennium BC followed by an increase during the LBA. Also included in Figure 68 are period-specific site measurements and resulting aggregate settlement areas (Whallon 1979, 262-263). Although the absolute settled area is much larger than that estimated for each period, the general trend remains the same, and we are apparently seeing a peak in settlement activity in this region during the LBA.

According to Whallon (1979, 278) peaks in aggregate site areas and, hence, population density in particularly the Altınova, occurred in periods of extensive commercial interaction and of imperial incorporation during the LBA and the Medieval period. The distribution of differentially sized settlements within estimated Thiessen polygons during the LBA is further interpreted as nearing the market based settlement pattern of central place theory (Whallon 1979, Figure 205).

Region G2 appears to have experienced a strong degree of settlement continuity throughout the Bronze Age (Figure 69), with most MBA sites showing continuity from

the EBA while around 30% of LBA sites are new foundations. The latter trend, however, can be explained by the increase in site numbers during the LBA. The majority of settlements with MBA occupation continue to be settled in the subsequent period.

The largest site in Region G2 is Norşuntepe with a total of 16 ha (Figure 70). Period specific measurements would indicate a growth in occupation area from the EBA (0.8 ha) to the LBA (8.2 ha). Excavations both at Norşuntepe and the nearby site of Korucutepe, which measures ca. 1.3 ha during the LBA, seemingly suggest that interaction with the Hittite core region was directed from the smaller site (Chapter 4 and 6). Several large sites also populated the Malatya plain during the LBA, including Arslantepe and Pirot Höyük. However, at least from the available survey evidence, no multi-tier settlement hierarchy such as in Elâzığ existed during the LBA in the former region.

The overall settlement trends of Region G2 are rather different to those observed in most other areas investigated in this chapter, but find some resemblance in southern Anatolia (Regions E and F). Striking in comparison to areas on the central plateau are the comparatively small dimensions of settlements in the top levels settlement hierarchies. A contrast to central Anatolia, and more closely resembling patterns in southern and western Anatolia, is the strong continuity of settlement from the MBA at these sites. Both Arslantepe and Korucutepe are occupied throughout the 2nd millennium, while MBA settlement at Norşuntepe appears to have been less extensive in comparison to its LBA occupation.

Apparently in stark contrast to the vibrant LBA settlement system in Region G2, survey and excavations further downstream of the Euphrates point towards a rather empty landscape in Region H.

5.2.8. Region H

Of the 58 sites recorded by the Lower Euphrates surveys in the Adıyaman and Urfa provinces, 20 dated to the EBA, but only nine and eight sites could be assigned respectively to the MBA and LBA, while 40 were dated to the IA. An additional five 2nd millennium sites were recorded by Burney in the Adıyaman area (Russell 1980).

Between 1985 and 1988 parts of this area were re-surveyed by the Tille Höyük excavation team (Blaylock, French and Summers 1990). It was hoped that the newly acquired local ceramic sequences from excavated sites would allow a chronological fine-tuning of the regional settlement pattern. This survey confirmed an increase in site numbers during the EBA, while no MBA or LBA sites were identified at all (Blaylock, French and Summers 1990, 103). The lack of a stratified ceramic sequence also made the identification of LBA sites difficult in the region around Kurban Höyük, where five sites were tentatively assigned to an LBA-EIA phase (Wilkinson 1990, 110-115).

The results of surveys conducted along the Euphrates and its tributaries in the Adıyaman and Urfa provinces, thus provide a picture of an empty countryside with few but strategically located settlements. Downstream from Tille Höyük on the Mesopotamian side of the Euphrates lies the relatively large mound of Lidar Höyük. Excavations revealed a large, fortified, MBA settlement, whose material culture evidence suggests links to the Hurrian south and east, to central Anatolia as well as to the Syro-Palestinian coast (Hauptmann 1987, 205). MBA II Lidar Höyük was violently destroyed (Mellink 1987, 8-10) and replaced by equally large-scale LBA architecture, including an LBA II storeroom with hieroglyphic seal impressions of Kuzi-Tesub of the Carchemish dynasty, pre-firing potmarks on storage jars and a LBA Egyptian style chariot wheel (Littauer, Crouwel and Hauptmann 1991, 352-358). The LBA pottery from

the site is said to have similarities to both Cilicia (Tarsus II) and Syrian traditions (Hauptman 1987, 204; Müller 2005 for connections to the NCA plateau).

Excavations at Titriş Höyük and a survey in its surroundings suggest a decline of the major site towards the end of the EBA and a scattering of settlement in its formerly empty catchment area. No MBA and two questionable LBA sites were identified (Algaze et al. 1992). The Bronze Age settlement horizons excavated at Kurban Höyük to the south of Titriş on the eastern bank of the Euphrates date to the EBA and early MBA (Voigt and Ellis 1981, 98; Marfoe 1983, 253).

The results of the Tigris-Euphrates Archaeological Reconnaissance Project, conducted prior to the flooding of the Birecik and Carchemish dams near the Turkish-Syrian border, covered around 180 km² along the Euphrates between the town of Halfeti in the north and the ancient city of Carchemish in the south (Algaze, Breuninger, Knudstad 1994). Instead of the urban collapse observed during the EBA/MBA transition in the area further north, Carchemish and its hinterland experienced an expansion of settlement in this phase. The developments of the following period, however, closely mirror those of the areas to the north. No typical MBA II Syrian ceramic types could be identified outside of Carchemish. Only one site with possible Middle Assyrian sherds (Cısırın Höyük) could be dated to the LBA but otherwise neither Syrian nor Anatolian ceramic traditions were identified in the survey area (Algaze, Breuninger, Knudstad 1994, 17).

Among the explanations for these intriguing patterns proposed by the surveyors (Algaze, Breuninger, Knudstad 1994, 18) are a lack of knowledge of local LBA ceramic traditions as well as the possibility that LBA centres existed outside the survey area, which only comprised the catchment area of the dam. If the observed settlement

patterns, however, are real, Carchemish may have been the only major site in the region.

5.2.9. Region I

The region east of the Middle and Lower Turkish Euphrates represents a cultural watershed as well as a political frontier region between the Mesopotamian and Hittite powers during the 2nd millennium BC. The MBA and LBA settlement evidence from surveys in Region I, however, is comparatively limited. As with Region H, the recognition and chronological fine-tuning of 2nd millennium BC materials is often difficult due to a lack of excavated settlements (e.g. Peasnall 2004, 33).

The area around the Turkish Balikh has been explored through archaeological survey since 1988 (Yardımcı 1990-2005; 1993). The early results of annual exploration around Şanlıurfa, Harran and Soruç (Yardımcı 1990-2005) are difficult to interpret due to the varied chronological terminology used in the preliminary reports. Overall settlement trends, however, include a first settlement peak during the EBA (23 sites), followed by a slight decline during the 2nd millennium BC (21 sites). In terms of cultural affinities, sites in the Şanlıurfa, Harran and Soruç region looked to the south and south-east during the latter phase.

Investigations north of Diyarbakır (Peasnall 2004, 33) and Batman (Rosenberg and Togul 1991, 245) had problems in the recognition of specifically LBA materials. The Tigris-Euphrates Reconnaissance Project (Algaze 1989; Algaze et al. 1991) in the Batman Su, Garzan, Bohlan and Cizre-Silopi areas too found the identification of Bronze Age materials difficult. In the Batman area, small quantities of MBA and LBA pottery in the form of Habur, Nuzi and later Middle Assyrian pottery could be identified at the larger sites, together with aspects of contemporary assemblages of a localised character (Algaze 1989, 245; Figures 1 and 2 in Roaf and Schachner 2005). The Cizre-

Silopi plain survey yielded at least seven large mounds, which show significant early 2nd millennium occupation represented by Habur ware, reportedly followed by typical Middle/Late Assyrian pottery (Algaze 1989, 246-247). Significant pre-Iron Age occupation, does not seem to have been encountered by explorations to the north of Cizre and in the Bohtan area (Algaze 1989, 247-254). Survey evidence in the Upper Tigris region around Boztepe and Talavaş Tepe suggest the existence of a strong indigenous cultural tradition during the final part of the 2nd millennium BC as well as a virtual absence of a hierarchical organisation of settlements prior to Neo-Assyrian conquest (Parker and Creekmore 2002, 67).

5.2.10. Region J

5.2.10.1. Region J1

The results of archaeological surface survey in the southern Hatay and in northern coastal Syria point towards a general trend of settlement decline during the LBA (Yener et al. 2000, 187-188; Casana and Wilkinson 2005; Pamir 2005; Braidwood 1937), while settlement to the south, around Homs and Qatna may be on the increase (Sapin 1987-9). A similar lack of chronological fine-tuning of local wares that affects most of Anatolia during the 2nd millennium BC, however, may bias the observed patterns (Akkermans and Schwartz 2003, 333).

In the Amuq plain, despite an overall decline in settlement numbers during the LBA, dominant MBA centres such as Tell Atchana-Alalakh (22 ha) and two secondary centres between 5 and 9 ha retained their position in the local settlement hierarchy (Yener et al. 2000, 187-188). Although the region as a whole experienced relative stability from the EBA to the IA (Casana and Wilkinson 2005, 38), information from the site catalogue seemingly points to some measure of discontinuity between settlements with MBA and LBA occupation in the medium to large size ranges. Related survey work along the Orontes River and its coastal plain yielded two sites occupied from the

MBA and LBA, Virşa Tepe and Sabuniye (Pamir 2005, 70-72), although more sites may lie covered by the alluvial deposits of the Orontes Delta.

5.2.10.2. Region J2

The Jabbul plain of western Syria occupies a transitory position between rain-fed agriculture to the west and the steppe to the east. Recent excavations at Tell Umm el-Marra and survey in its vicinity (Curvers and Schwartz 1997; Schwartz et al. 2000, 447-457) provide insights into MBA and LBA settlement trajectories in this region. The long-term trend from the Jabbul plain shares overall similarities with other areas of northern Syria (e.g. Wilkinson 2003, 125), which experienced a peak in EBA settlement followed by a notable decrease particularly during the LBA; even if there existed a relatively strong continuity in site-locations throughout the Bronze Age.

Umm el-Marra, with ca. 25 ha remained the dominant centre in the region throughout the Bronze Age. During the MBA the site is thought to have been the seat of a vassal of the kingdom of Yamhad at Aleppo. A clay tablet found in an LBA house at Umm el-Marra details the granting of Mitannian citizenship to several individuals in the presence of the Mitannian king Shuttarna II (ca. 1400 BC) and is sealed with the seal of his predecessor Saustatar (Cooper et al. 2005). In another part of the mound, a destruction episode was C^{14} dated to the 14^{th} century BC. Despite the presence of some Cypriot and Nuzi ware imports, LBA II Umm el-Marra assumed a more local character with no fortification system or public buildings, in keeping with the settlement decline in the surrounding area (Schwartz et al. 2000, 456).

Further to the south, preliminary results of the Homs Regional Survey (Philip et al. 2000, 18-19), as elsewhere in Region J, suggest that settlement was restricted to a small number of long-lived mound sites in the 2^{nd} and 1^{st} millennia BC. A cluster of sites is reported from the confluence of the Orontes river into Lake Qattin where a

number of smaller mounds group around the largest sites in the northern survey area, Tell Nebi Mend and Tell es-Sefinet Nebi Noah, in what seems to be the centre of the polity of Qadesh (Philip et al. 2000, 19). To the north, two small sites (> 1.5 ha) revealed evidence for substantial fortifications (Philip et al. 2000, 19). Further to the south, mounds decrease in size with an irregular distribution pattern along water sources.

5.2.10.3. Region J3

Archaeological exploration in the Syrian hinterland have concentrated on the Euphrates and its tributaries, the Balikh and Habur. Survey and excavation projects in this area too were induced by large-scale hydraulic projects. As in the above cases, insufficient temporal resolution in ceramic chronologies impedes detailed site periodisations (e.g. Akkermans and Schwartz 2003, 341).

The Tishrin and Tabqa dam areas just to the south of the Turkish-Syrian border have revealed a series of MBA and LBA settlements along the Euphrates. Only few kilometres downstream of the Hittite viceregal seat of Carchemish, lie the sites of Shiyukh Fawqani, Shiyukh Tahtani and Tell Ahmar, which have begun to yield evidence for LBA occupation (Del Olmo Lete and Montero Fenollòs 1999; Akkermans and Schwartz 2003, 344). Further to the south, a series of fortified LBA strongholds lined the Euphrates. These settlements include Bazi (Einwag and Otto 1996, 1999), Munbaqa-Ekalte (Werner 1998), Hadidi (Dornemann 1979), Meskene-Emar (Margueron 1980; 1995, 1997), Faq'us (Margueron 1982) and Tell Fray (Matthiae 1980). A general theme at these sites is their expansion from often modest MBA to sizeable LBA centres on the one hand, and the marked absence of palatial institutions with the exception of Meskene-Emar. Textual sources from these sites indicate the operation of a communal authority of elders or "brothers", who had specific seals and operated on a level distinct from, and possibly in competition with, those of palatial

institutions at, for instance, Meskene-Emar (Akkermans and Schwartz 2003, 342-345). In this light, Margueron (1993, 173) proposed that the fortification of Euphrates settlements and the expansion of some sites were related directly to Hittite dominance of the region. Similarly, although from a different angle, McClellan (1997) has attempted to explain the apparent absence of special administrative structures at these sites with centralised, imperial systems, which governed the Euphrates area from further afield.

The Syrian Jazirah to the east of the Euphrates has been explored archaeologically on a comparatively extensive scale. Survey results in the wider region of the Balikh valley (Akkermans 1984, Wilkinson 1998; Lyon 2000), and the Habur triangle (e.g. Wilkinson 2002c, 2003, 236; Ristvet and Weiss 2005) all suggest a trend from a densely settled and nucleated EBA landscape to a diminished and more dispersed settlement during the 2nd millennium BC.

Interesting to note for comparative purposes are the Habur and Balikh settlement trends during the phase of Mitanni rule and the political changing of hands of the region to Middle Assyrian dominance. Against the background of a recovery of site numbers during the LBA in some areas, old regional centres such as Tell Leilan (Ristvet and Weiss 2005) appear to have been abandoned in favour of newly founded settlements (Wilkinson 2000c, 32-37).

Middle Assyrian expansion into the Balikh, identified on the surface primarily through a standardised pottery repertoire, at the end of the LBA was marked by a settlement decrease from 41 to around 12 sites (Lyon 2000, 99-101). This overall decline appears also to have affected the largest mid-second millennium BC site, Tell Bi'a (11 ha). The largest site with Middle Assyrian occupation is Tell Sahlan with 8.3 ha, with the

remainder of settlements, including the excavated Middle Assyrian outpost at Sabi Abyad (Lyon 2000, 99-101), ranking in the lower size categories.

5.3. Landscapes of Control and Dependency – Preliminary Conclusions

From the above discussion of regional settlement trends, a spatial pattern of socio-political changeover as well as degrees of control or dependency is tentatively emerging. The intensity or visibility of these tendencies is dependent on various factors of data quality and reliability, but notwithstanding these limitations, a number of overriding cross-regional trends and regionally idiosyncratic settlement developments can be constituted and contextualised within a broader perspective of Hittite political expansion and integration.

Beginning with longer-term trends, we observe a peak of settlement, at least in terms of absolute site numbers, during the EBA in most regions. This development has already been remarked on previously for parts of Anatolia by, for instance, Mellaart (1958, 311) or Burney (1958) and more recent field projects seem to corroborate these initial observations. A total of 2211 sites with either Chalcolithic, Bronze Age or Iron Age evidence or with a combination thereof have been included in the database, which forms the primary basis for analysis in this chapter (Appendix 2 for LBA sites; for reasons of data quality and detail of presentation in the original publications, not all of the ca. 60 surveys drawn upon have been included in this database). A cross-regional site count (Figure 71 and Figure 72) illustrates a drop in site numbers from the EBA (1552 sites) by almost two-thirds to the MBA (612) and a slight increase in identified LBA sites (647). In contrast to the EBA to MBA decline, MBA to LBA trends vary between regions. In the IA (1055), site numbers rise to almost double that of the LBA, although the amplitude of this trend again fluctuates across Anatolia. In these very general terms, Anatolian settlement developments are comparable to those observed for the wider Western Asian region (e.g. Wilkinson 2003, 125-127). This pattern of

dramatic decline, however, should be viewed in the context of the length of each chronological period and the lack of differentiation between the sub-phases of the longer periods by many surveys.

More immediately related to the questions investigated in this chapter are changes in settlement patterns and organisation between and during the MBA and LBA. The effects of limited chronological resolution of surface pottery are likely to present a source of bias. Sufficiently detailed evidence, however, is available in some areas to allow the characterisation, even if tentatively and in a preliminarily manner, of several settlement trends that are indicative of LBA socio-political transformations and, as such, of the nature of local-imperial interrelations (Chapter 2). These include:

- territorial integration of key central regions,
- hegemonic control as a possibility and
- processes of active and passive frontier formation.

Overall,

- a cross-regional settlement hierarchy headed by Boğazköy-Hattusa (180 ha) emerges, alongside
- an apparent north-south orientated decline in overall settlement size and
- a possible medium-term north-south drift of LBA settlement.

5.3.1. The Spatial Organisation of Direct Control

Beginning with the central region of the Hittite political entity (Region A), survey results indicate a series of changes particularly in the upper levels of regional settlement hierarchies. Survey results in Region A have pointed to increasing integration throughout the Bronze Age, but at the same time, to a dilution of overbearing regional power in favour of a diminished local hierarchical scale. Observing this trend in the

Alişar Region, Branting (1996, 153) has proposed the incorporation of this area into a larger political structure as a possible explanation. This would sit well with Ron Gorny's (1995a) observations on the degradation of Alişar's (*Ankuwa*?) status in the process of Hittite state-formation and the territorial integration of central Anatolian regions. It also corresponds well with settlement developments across the central plateau documented by other surveys. During the LBA, Regions A1, A2 and A3 witnessed either the decline in importance or the abandonment of major MBA centres. Their places at the top tier of regional settlement hierarchies were taken up by old secondary or newly established centres, of lower spatial extents.

In view of the many problems inherent in the present data set, it would seem almost prohibitive to further stretch these results. Yet a trend is starting to emerge, however tentatively, that these rather similar processes of partial or complete replacement of MBA power-bases by spatially less expansive LBA centres and the achievement of tighter settlement integration have a distinct chronological pace in different areas. Clearly, further research will be needed to affirm, or contradict, this proposition but perhaps we are looking at two temporally overlapping but not entirely congruent sequences in the process of establishing and expanding intensive/territorial integration on the central plateau. In Region A2 this development took place mostly during the Old to Middle Hittite phases. Conversely, in the latter part of the LBA, integration efforts of this kind may have been directed more intensively towards the southern plateau instead (Region A3). Sites in Region A2, although continuously occupied, show signs of deterioration from their Middle Hittite apogee in the second half of the LBA.

The establishment of new centres combining administrative, economic and cult activities such as those excavated in Region A2, does not only serve the practical aspects of the exertion of intensive, territorial control. The foundation of new sites and

their standardised character also exerts a strong symbolic message of the shift of power from a local to a spatially more extensive polity.

Gorny's (1995a) proposition that the destruction and/or removal of fortification systems were signs of defeat and deliberate degradation of settlements resisting Hittite force, may represent an additional aspect of ideologically charged strategies of direct control, which could go hand-in-hand with the above processes. City walls, their destruction and rebuilding phases, are often difficult to date and, as discussed in Chapters 1 and 2, even more difficult to correlate with textual-historical narratives of conquest and destruction. The concept, however, is worth investigating further. The textually attested Hittite tradition of deliberate removal of a hostile city's fortification walls resonates with a broader West Asian tradition that perceived of such walls as a major characteristic of cities, the seats of political power (Van De Mieroop 1997, 48-48, 73; Smith 2003, 210). The destruction of a city's walls by a victorious army, thus, presented a practical and symbolic gesture of the removal of independence and political power throughout ancient Western Asia (Postgate 1994c, 76, 252; Smith 2003, 210-211).

To date, surveys and excavations on the central plateau offer little additional comparative material for the assessment of Gorny's (1995a) suggestion. Most excavated MBA centres all but cease to be occupied in the following period, while survey publications only rarely report on such features and on the whole tend not to be able securely associate architectural elements with specific periods. Several excavated settlements in peripheral areas, however, may be examined from this perspective. In these instances, the continuation, cessation or new establishment of fortifications serves as one piece of evidence in what are unavoidably circumstantial arguments for domination or the absence of it (see below). For the time being, I will concentrate on the central Anatolian situation and the question of the nature of these newly established LBA centres throughout Region A.

For the purpose of this investigation, a broad correspondence between site-size and position in political hierarchy has been assumed; although there are notable exceptions in, for instance, frontier situations where military, administrative and economic nodal points may be represented by much smaller sites. An example for this type of site is Tell Sabi Abyad (Akkermans and Wiggermann 1999) from the Assyrian side. In Anatolia, notably smaller site-ranges line the northern fringes of recognisable LBA settlement. In Chapter 3 I have combined the material culture signatures of excavated central Anatolian sites with their textually attested status and function in the administrative and economic hierarchy of the Hittite state as well as the approximate spatial scope of these roles in order to construct a culturally sensitive model for the interpretation of wider LBA settlement patterns. Three, at times overlapping, administrative levels from the institutions of local palaces/capital of "Lands" to regional and district centres have been linked to the excavated sites of Ortaköy-Sapinuwa, Kuşaklı-Sarissa and Maşat-Tapikka. The site-size of Ortaköy-Sapinuwa is difficult to assess from the preliminary publications, but if the identification of Kayalıpınar with Samuha (Müller-Karpe 2000, 364) is correct, we may tentatively assume around or above 25 ha for the capital of a geopolitical entity described as "Land" in the texts.

Survey sites dating to the LBA and classified as "major", which appear to be taking over regional control from larger MBA centres in the southern and eastern parts of Region A, range between ca. 10 and 20 ha. In addition, the Konya Plain survey has detected a 33 ha site on the southern plateau and another 26 ha site is known from Sivas province. At least in terms of size, these sites could represent centres of the largest administrative entity in Hittite texts. Detailed site-size measurements and estimates from the Keban Dam survey (Whallon 1979) suggest that, on average, mound dimensions have to be downscaled for an approximation of period-specific occupation extents. An overall similarity between most newly established LBA settlements in Region A with the dimension of the regional cult centre of Kuşaklı-

Sarissa (ca. 18 ha – intramural) and the district centre and seat of AGRIGs' and BEL MADGALTIs' at Maşat-Tapikka (ca 8 ha), may therefore be suggested. The newly established LBA site of Gubat Sehri (Region A1 south), Varavan and Höyük-Altılar (Region A3 north), could, thus, be hypothetically identified as regional centres with a political and administrative scope of Kuşaklı-*Sarissa.* In Region A1 (south), the sites of Yorğunhısar (9 ha), Büyükkale (7.5 ha), both of which are occupied in the preceding period, as well as the newly established Büyükkaletepe (6.2 ha) may have acted as district centres on a scale comparable to Maşat-*Tapikka.* In the region around the Salt Lake, Azak Kalesi (11.3 ha) to the south-west falls somewhere between the two categories, while Çopuroglanın Çukur (10 ha), Höyük Tepe (7.7 ha), Yalnız Ağıl (7 ha) and Acemi Höyüğü (6.9 ha) fall into the range of LBA district centres. With the exception of Acemi Höyüğü, all of these sites appear to be new foundations of the LBA.

As a working hypothesis, the settlement developments in Region A during the LBA can be interpreted as a process of implementation of strong political and economic control in the Upper and Lower Lands, with potentially large-scale investment on the part of the central power to direct administrative and economic as well as symbolic power away from traditional central-places and to channel local administration into smaller regional and district centres. The temporal sequence tentatively suggested above, however, points towards a process of integration that potentially took much longer than textual sources give the impression of, particularly on the southern plateau. Adams (1979b) has already pointed out that even heartlands of empires had to be conquered and united.

At the same time, spatial organisation in more rural settings, and with it presumably land-tenure and agricultural exploitation, seems to have experienced a greater degree of continuity. Hittite textual sources are very limited on such issues, yet they may hold one key to the explanation of this phenomenon. In these texts an overriding strategy of

dispersed land-ownership by the state and its various institutions as well as the equally discontinuous nature of large-scale private landed property are evident (Paroussis 1985; Bryce 2002; see Chapter 3). Land-holdings of this kind were made up of a variety of fields, gardens and pastures identified through their location within the administrative realms of specific settlements. This practice, thus, seemingly placed the settlement unit and its community, rather than specific state institutions or private estates at the centre of land-tenure arrangements. Formulated as a research question rather than a firm proposition, Hittite land-tenure practices as described in the textual sources, and whose roots presumably lie in preceding Anatolian practices, may, therefore, present a possible explanation for a seemingly more stable spatial organisation of the rural sector in Region A.

The next question has to be whether it is possible to identify the same spatial signature of territorial control in areas beyond the central core region. The answer to this question, at least for the time being, remains negative. On the one hand, crude survey data prohibit similarly detailed re-analyses in most other regions, while patterns observed in the records of more systematically explored areas point to different settlement dynamics. The latter include, for instance, the developments of Region G2, which may be indicative of a degree of central involvement that lies somewhere between territorial integration and hegemonic control.

5.3.2. The Spatial Signature of Hegemonic Control – Some Starting Points

Hegemonic control, by virtue of its indirect, political nature (Chapter 2) is difficult to pinpoint through information collected with traditional Western Asian archaeological interests in mind. Settlement analysis, in theory, is well suited for the identification of social and cultural transformations, which may be related to indirect rule, although more than one thread of evidence is necessary to construct a convincing argument of this kind. Hypothetical elements of the spatial signatures of hegemonic or political

control include the continuation of traditional power-bases. Variations may be expected in the vulnerability or capabilities for self-defence of these central settlements, which can be connected to Gorny's (1995a) suggestion mentioned above. From a regional perspective, potential shifts in the lower echelons of settlement hierarchies as responses to economic pressures as well as improved security situations may also be expected.

Region G2 as well as Regions E and F show signs of increasing settlement numbers in the LBA. The overall appearance of these regions, however, suggests different degrees of an intermediate form of external control.

Against the backdrop of settlement increase during the LBA, the settlement system of Region G2 appears to have experienced a relative degree of stability, with almost all MBA sites seemingly continuing to be occupied in the following period. New settlements were established primarily in the lower levels of the settlement system, with small sites increasing by ca. 37% and medium sized-sites by ca. 60% in the LBA. At the highest level of the local settlement hierarchy, the most striking is the growth of Norşuntepe, from ca. 2.5 ha in the MBA to ca. 8.2 ha in the LBA. The MBA occupation of the site was mostly erased by later settlements but included a MBA city wall (Frangipane 1993, 47). LBA houses at Norşuntepe show a remarkable degree of continuity throughout this period, despite a destruction horizon (Korbel 1985, 47). Notwithstanding the dominance of Norşuntepe of the local LBA settlement hierarchy in terms of site-size, excavations on the summit of the mound did not reveal structures with monumental character such as religious or administrative buildings or fortification systems. There was also only very limited evidence of administrative technology recovered at the site, while more extensive evidence of this sort came from the much smaller site of Korucutepe (1.3 ha LBA extent) (Chapter 6). At Korucutepe the sampling strategies of the original excavation make the identification of individual

structures difficult, and, despite the reference to the first LBA II (Phase J) layer as "Massive Architectural Stage", monumental edifices are elusive. A large-scale fortification system was originally dated to the MBA Phases G or H (Van Loon 1980, Plans 56 and 58) and a LBA II date has later been suggested (Ertem 1974, 40; Burney 1980, 166).

As regards Gorny's (1995a) hypothesis on Hittite strategies of integration, a defenceless and small Korucutepe at the centre of the local polity would fit rather well the picture of a subordinate political entity whose allegiance had shifted between Hatti and Mitanni prior to its lasting incorporation into the Hittite state as suggested in the texts. A LBA Korucutepe in possession of extensive fortifications alternatively could be argued to have been under various kids of central Anatolian cultural influences. Tactics of politically motivated emulation may be observed in the glyptic (Chapter 6) as well as the use of some NCA pottery types (Chapter 5).

If the removal or disuse of fortification systems may be seen as possible indications for the imposition of external rule, what can the construction of such features indicate about the political development of a site or region?

Late Bronze Age levels at Arslantepe (ca. 5 ha), situated west of the Euphrates near the modern town of Malatya, have only been partially excavated but include the remnants of two superimposed 2nd millennium BC fortification walls and gate structures. The defence system of Period VB (1650-1500 BC) shows influences of both the Syro-Mesopotamian and the Anatolian realm. The settlement of the following Period IV (1500-1200 BC) was protected by a construction of stone foundations with mud-brick superstructure and the re-positioned gate structure is of a type generally associated with NCA. The pottery tradition of Period IV, although sharing some

connections with central Anatolia, is described as mostly local in character (Frangipane 1993, 48; Pecorella 1975; see Chapter 4).

Drawing together the different threads of evidence for Region G2, the following picture emerges as one possible interpretation. The Malatya plain on the west bank of the Euphrates appears to have been controlled, if not through direct central Anatolian intervention then with its consent, by the fortified stronghold of Arslantepe. Conversely, the region to the east of the river was apparently left defenceless in the LBA and perhaps devoid of self-determination, if the original dating of the Korucutepe fortifications is accepted (van Loon 1978; Bier 1978). Cultural connections and the possible existence of a king of Isuwa at the site (Güterbock 1973) point towards a Hittite vassal-state in the Altınova, albeit of rather modest character. The area as a whole, however, experienced an increase in settlement numbers and aggregate occupation area, suggesting an improved economic and possibly also security situation. The mode of imperial control in the region may be described as "intensive hegemony" as it seemingly went beyond purely political interaction.

Regions E and F on the southern fringes of Anatolia show general similarities with the developments in Region G2. Firstly, surveyed parts of Rough Cilicia (Region E) and Cilicia proper (Region F) appear to have experienced an increase in settlement numbers during the LBA. In addition, sites already of regional importance during the MBA such as Mersin and Tarsus, continued to thrive in these roles throughout the LBA. In terms of fortifications, only Mersin appears to have been protected by a substantial defensive wall (Garstang 1953; Sevin and Köroğlu 2004). Conversely, Tarsus clearly featured a monumental structure on its western summit and evidence of written correspondence as well as administrative links to the Hittite state have been found, albeit in a difficult stratigraphic context (Goldman 1956; see Chapter 6). Evidence of such direct connections with the Hittite heartland also comes from Kilise Tepe in

Region E and the entire area appears to have entertained increasingly close cultural links with central Anatolia in this period.

Survey evidence in western Anatolia is limited and difficult to interpret. In the case of Troy and its surrounding region, the site clearly retained and enhanced its regional position during the LBA and effectively nothing in terms of archaeological evidence points towards central Anatolian dominance. A similar picture emerges for the Turkish Aegean coast, which seems at least culturally to have followed very different paths to the central plateau and areas to the east.

The inland area of Region D, represented by the site of Beycesultan underwent medium-term processes that could be argued to re-present a loss in regional importance of the site indicative of processes of external control. Beycesultan, as well as the region around it, appears to have experienced a gradual decline in settlement numbers from the MBA to the end of the LBA. During the MBA, a large-scale structure referred to as the "burnt palace" dominated the mound (Lloyd and Mellaart 1965, Fig. A4). No such building stands out among houses of LBA Level III or the following Level II, although the houses in this phase were large, neatly arranged along streets and contained considerable wealth. After their destruction, efforts to rebuild the settlement in Level Ib were made but much of the site was abandoned in Level Ia. Throughout the LBA, the site does not appear to have been protected by a fortification system. In terms of material culture, the excavators have proposed an increasing approximation of a largely independent cultural tradition to the central Anatolian plateau in the last phases of occupation (Mellaart and Murray 1995). Unfortunately, survey data are not sufficiently detailed to trace a possible shift of regional power elsewhere.

Northern Syria as a whole poses an interesting problem for the identification of hegemonic rule. Textual evidence from both Ras Shamra-Ugarit and Meskene-Emar

leave no doubt about the domination of these two kingdoms by the Hittite empire from the 14th century BC. With the exception of Anatolian influences in administrative practices at Meskene-Emar and other sites, however, little in the form of direct material culture evidence can be presented to corroborate Hittite rule at these sites. Signs of indirect rule, local adaptations to or reactions against it in the form of re-arrangement of economic organisation are difficult to reconstruct from both currently available excavation and survey records. Hints of a transformation in the more rural areas of northern Syria come from the Jabbul area, where, Umm el-Marra, the seat of a vassal of Yamhad in the first part of the LBA shows clear signs of decline in regional importance during the LBA II in keeping with diminishing settlement numbers in the area. West Syria as a whole underwent a similar overall decline in site numbers. Closer to the coast, major settlements such as Atchana-Alalakh and Ras Shamra-Ugarit clearly retained their regional positions, although Atchana-Alalakh underwent a dramatic internal reorganisation from a palatial structure with archives detailing Mitanni rule in Level IV to a fortress and several temple buildings in the subsequent phase (Yener 2005b). Ugarit, on the other hand, shows a rather undisturbed LBA development and growth. Conversely, the latter site had only insignificant defensive architecture in the second part of the LBA, while the citadel of Atchana-Alalakh is clearly well protected. From the available evidence, perhaps we can constitute a similar situation as in the Malatya-Elâzığ region. With a local, fortified stronghold, probably under tighter imperial control holding sway over a hegemonically controlled region, which is however militarily, and perhaps equally importantly, symbolically vulnerable.

To the east, LBA settlement densities along the Euphrates increased to the south of Carchemish (Van Loon 1967). From sites excavated so far, two major groups of settlements may be distinguished. The first consists of a number of previously settled locations, which see a dramatic increase in size during LBA, which was accompanied by the fortification of some of these sites. Similarly well defended are a number of

smaller sites dotted between the larger centres and clearly acting as way stations and military outposts. The chronology of both urban flourit and the construction of defences along the Euphrates, however, is not as fine-grained as one would wish and Margueron's (1993, 173) suggestion that they are to be attributed to Hittite rule cannot be readily corroborated on archaeological grounds, although the textual sources leave no doubt about their political connections to the Hittite realm. In respect of the developments along the Balikh valley and the clear evidence of Middle Assyrian frontier installations, LBA II sites on the Syrian Euphrates formed part of the eastern limits of Hittite imperial control but also allowed Hattusa a southern finger on the pulse of one of the major trade and communication routes of Western Asia. For the most part, however, our understanding of this constellation comes from the textual sources. A conclusive archaeological argumentation of this kind is rather elusive.

5.3.3. The Limits of Control

The location and analysis of the limits of imperial outreach is a major concern of the study of ancient empires and presents numerous challenges to an archaeological methodology. One of the main difficulties lies in the multiple characteristics of such boundaries and the frequent divergence, in space and material characteristics, from the idealised limes of modern national or military borders. Cultural, ethnic or linguistic boundaries do not in general overlap geographically with political borders; although cultural spheres are influenced by political boundaries (Rodseth and Parker 2005, 10; Parker 2003). As a consequence, most border zones are environments of social and cultural interaction, rather than of absolute separation, with their own dynamics of cross-border identity formation and cultural intermingling (Lightfoot and Martinez 1995; Lattimore 1962). These in turn produce frontier relations potentially very different to those described in official textual sources and may become vital variables in the development of political and cultural entities on either side. In a recent collection of

papers on frontier dynamics, Rodseth and Parker (2005, 3), thus, pointed out "...societies have been formed and transformed in relation to their frontiers...".

Borders, including those of the Hittite empire, as they are known from the texts, present the meeting points between a variety of socio-cultural and political entities, which may or may not share similar levels of technological or social complexity. The process of border formation underlies social expansionary dynamics, usually on the part of the imperial core, and its technological or ideological limits. Borders, however, may also be imposed onto and driven into empires either by the expansion of rival imperial polities or by groups whose social organisation and mode of living allows them to refuse and effectively escape traditional methods of imperial domination. Several such "barbarian frontiers", as they are often described in the textual sources, seemingly played crucial roles in the development and downfall of the Hittite empire.

Archaeologically, the limits of political and/or military power are often difficult to identify on the basis of patterns in material culture distributions. Cultural similarities, the spread of these or indeed their apparent absence are not as such simple indicators of political unity or independence. Most clearly visible in the archaeological record are longer-term military frontiers, which are directly controlled by the imperial centre. Luttwak (1976) has distinguished between more or less linear perimeters of defensive outposts hindering penetration from the outside alongside a more penetrable "defense-in-depth" military strategy. In terms of material culture, the first strategy can be expected to produce a relatively strong degree of cultural differentiation between areas within and outside this line of defence. Frontier zones along the lines of a "defense-in-depth", involve a series of self-contained military outposts strategically positioned along communication routes, which allow a greater extent of cultural interaction. Alconini (2005), from her research of Inka imperial frontiers, outlined a third model of a "soft military perimeter", which consists of self-contained outposts in strategic locations

which ward off sporadic threats from "highly fragmented nuisance groups". In addition to directly administrated frontier strategies, an alternative type of border zone, which, in material culture terms, is far less easily brought in connection with imperial rule, are the limits of indirect imperial control, with vassal or client polities primarily in charge of outer defences.

One of the most striking frontiers of the Hittite empire, in terms of both its importance to Hittite imperial development and its archaeological visibility, can be identified in the LBA settlement dynamics of the Pontic zone in Region B.

5.3.3.1. The Northern Frontier

Archaeological survey and excavations in Regions B1 and B2 have yielded evidence of drastic changes in regional settlement strategies during the course of the later 2nd millennium BC, which may be seen as evidence for a range of trajectories related to contested zones and the formation of imperial frontiers. These observations are not new (Yakar 1980; 1992, 510; Yakar and Dinçol 1974, 91; Dönmez 2002, 274-276; Matthews 2000b, 1017-1018) but are conventionally restricted to the data from individual survey projects and thus lack the broad geographical overview of comparative analysis.

During the 2nd millennium BC, the northern and north-eastern fringes of the central Anatolian plateau were affected by two large-scale settlement processes. The first trend is characterised by a dramatic decline, and in some areas a cessation, of LBA settlement in the central Pontic zone. The second development appears to have been, at least in part, a reaction to the first. It includes the strengthening of the fringes of LBA settlement in the form of fortified lines of defense and increasing settlement activities in their hinterland, reminiscent of a "soft military perimeter".

Beginning with the first trend of a northern settlement drain, only few LBA sites have been identified in Kastamonu province, while none at all were detected in Sinop. Coastal areas in Samsun too seemingly experienced a hiatus in sites with recognisable LBA central Anatolian pottery. The southern limit for this process was the Devrez Çay south of the Ilgaz range. With the exception of an outpost to the north-west, four fortified settlements with LBA ceramic evidence at distances between ca. 15 and 25 km guard the passages to a more densely populated southern region. Comparable trends, however, less systematically explored and not entirely agreed upon by various Anatolian scholars (e.g. Dönmez 2002 contra Yakar and Dinçol 1974), can be observed to the east. Settlement shifts/disappearance in the Sinop and Samsun provinces, appear to have come to a halt in inner Samsun and the northern part of Amasya province with a much more widespread settlement pattern to the south.

The two intermediate zones between Pontic and central Anatolia are also comparable in terms of the nature of their LBA settlement systems. In terms of site-size distribution, a basic similarity can be established between the Amasya Province and the Paphlagonia pattern. The largest recorded site with MBA and LBA evidence in Amasya is Oluz Höyük. With 5.9 ha, Oluz is comparable to the 6.3. ha site of Maltepe, which was situated within a cluster of small and medium sites and appears to have acted as the regional centre of inner Paphlagonia. Other large sites in Amasya province range between ca. 3 to 5 ha, while the second largest recorded site in Paphlagonia is the fortified stronghold of Dumanlı (3.3 ha). In comparison to LBA regional centres further to the south such as Kuşaklı-Sarissa (18 ha) in Sivas province, sites on the northern fringe are rather small, although the 6 ha of Oluz and Maltepe are comparable to the ca. 8 ha site of Maşat-Tapikka, which was the seat of a BEL MADGALTI or chief of the border guard and functioned as an administrative centre and military stronghold in the eastern Upper Land.

The 2nd millennium settlement development in inner Paphlagonia, however, also differs in important respects from that of Samsun-Amasya as well as more central regions. Despite, or perhaps because, of the region's frontier status, settlement is clearly on the increase in the LBA.

A further boundary of LBA settlement is the Kelkit river, beyond which only a small number of 2nd millennium sites have so far been detected; and excavated sites indicate that during this phase Region B2 was inhabited by groups of greater physical mobility and less complex socio-political organisation than the sedentary populations under direct Hittite rule.

5.3.3.2. Along the Euphrates

A less clear-cut frontier situation may be witnessed along the Euphrates in Region H. The archaeological evidence of this area appears to point towards the limits of both cultural influence and political power by a number of imperial polities during the later 2nd and 1st millennia BC. Surveys and excavations along the Turkish Lower Euphrates, suggested a very low settlement density during the LBA, with the exception of a few strategically located sites dotted along the Euphrates. Culturally the LBA assemblages at Tille and Lidar Höyük present a mixture of Syrian and Anatolian influences but evidence for NCA administrative technology and textual sources place them within the Hittite realm. Defensive architecture and the absence of smaller sites may point towards a precarious security situation (Whallon 1979).

The only possible LBA site identified by the Euphrates and Tigris survey (Algaze et al. 1992), is characterised by Middle Assyrian materials and 2nd millennium sites in Region I, besides their limited numbers, too formed part of the Syro-Mesopotamian cultural sphere. A hint of the political and military back and forth in Regions H, I and J is provided by the evidence from Tell Fray, where LBA II levels yielded both a bulla with a

seal impressions of Hattusili III and Puduhepa as well as a series of Middle Assyrian tablets (Chapter 6), while the material culture of the site is of local character (Pfälzner 1995, 203-204).

5.3.4. The Wider Picture

A few additional points can be made about the empire-wide settlement pattern. First of all, a broad comparison between the textual evidence for central Anatolian settlement dynamics (see also Chapter 3) and the results of cross-regional archaeological analysis may be drawn. Alfonso Archi (1976-77, 99-101) has pointed out that during the MBA around 31 cities with either a sovereign or palace are mentioned in Old Assyrian tablets in central Anatolia. The ascendance to power of Hattusa in the LBA is interpreted as leading to the "impoverishment" of Anatolian cities, while the 13th century BC is seen as a period of resurgence of urban implantations cross Anatolia (Archi 1976-77, 99-101). In terms of administrative centres, altogether 12 local palaces are mentioned in Old Hittite texts and seven in Empire Period sources (Siegelovà 2001), while Archi (1976-77, 100) counts 94 urban centres, which housed either storehouses or AGRIG officials during the reign of Telipinu. In addition, numerous cult centres are mentioned in the textual sources (Hazenbos 2003), although these may range from urban settlements with temple structures to stone stele outside settlement contexts.

In terms of overall settlement hierarchy, the Hittite capital, Boğazköy-Hattusa, is undoubtedly the largest settlement in Anatolia and northern Syria during the LBA (e.g. Naumann 1955, Abb. 246 and Klengel 1999, Abb. 15; Archi 1976-77, 99); that is if claims about the exceedingly large dimension of Ortaköy-Sapinuwa (Süel 2002, 165) are not taken into account. The settlement level in terms of both regional centres on the central plateau and capitals of vassal states in northern Syria range between 20 to 30 ha. In Anatolia only about five settlements (of 647 LBA sites) were recorded by survey projects that reach these dimensions. A total of around 24 settlements fall into

the "major" size category, some of which may hypothetically be equated with provincial, cult and/or district centres as outlined in Chapter 3. Around 86 LBA sites across Anatolia (with the exception of western Anatolia and northern Syria), for which site-dimensions have been recorded, fall into the "large" category. Some of these towns in turn may have served as local nodal points for the centralised storage and re-distribution of produce, labour and other services. As is to be expected, the majority of recorded settlements, almost 300, fall into the "medium" and "small" category of what are probably agricultural villages and small towns. Total aggregate occupation area from this data suggests a slight increase from 1263 ha in the MBA to 1316 ha in the LBA. The overall rank-size distribution of MBA and LBA settlement systems in Anatolia (Figure 73 and Figure 74) indicate a more integrated system in the latter phase, although with an overbearing centre. Map 45 shows the distribution of major and large LBA sites across Anatolia.

In the light of settlement developments particularly in Region A, Archi's (1976-77) observation of the falling out of use of MBA centres during the LBA is a correct one, only that there was not a wholesale urban "impoverishment" to follow, but a downscaling and integrating of previously independent regions under the dominance of an apparently overbearing capital.

Long-term excavations at the capital city, despite recent efforts to recover residential areas (e.g. Seeher 2003), have unearthed a monumental but seemingly empty city. Across the city, residential quarters are comparatively restricted with population estimates ranging between 10,000 and 15-20,000 inhabitants. Drawing on Mora's (1977, 236) estimates of habitation areas, an approximate total of 27-30 ha habitation space emerges. In this way, ca. 150 ha are the monumentalised, symbolic space apparently necessary for the administration and representation of an empire (discussion with Todd Whitelaw, spring 2005). The estimated domestic or housing area

falls in the upper limits of regional centres excavated and surveyed elsewhere. Although sites in the size-range of Kuşaklı-Sarissa too are likely to have had substantial proportions of their inter-mural space taken up by monumental edifices.

As in the previous chapter, the conclusions outlined here about LBA settlement developments in Anatolia and beyond are preliminary and will be subject to a process of updating, testing and revision in the light of future research and the final publication of survey projects that are as jet only available in the form of annual progress reports. The compilation and analysis of archaeological settlement data in this way, however, are part of the necessary groundwork on whose basis expectations and new research questions may be formed in order to explore in more detail the broad trends identified in this chapter. At the same time, another layer of inter-regional interaction has been added to the patterns observed in Chapters 3 and 4 and distinctive signatures of different types of regional relationships have begun to emerge. Taking a further step upwards in terms of the socio-political level of interaction, the following chapter is concerned with the spatial and chronological distribution of two categories of evidence closely associated with political strategies of control and its arbitration.

CHAPTER 6: DISCOURSES OF POWER – HITTITE ADMINISTRATIVE PRACTICES AND MONUMENTAL PROJECTIONS OF HEGEMONY

Set against the archaeological framework provided by the results of the ceramic and settlement analyses in the preceding chapters for the intensity of cultural interaction between, and the spatial-political transformations within, the different regions of Anatolia and northern Syria, this chapter will examine two sets of evidence indicative of high-level political and ideological interchange. Administrative evidence in the form of texts and glyptic and monumental representations will be investigated from a primarily archaeological-spatial perspective, while the inherent textual-historical quality of these two categories of evidence have the advantage of providing a fine-grained chronological resolution and the possibility to distinguish between imperial and non-imperial agents.

6.1. NCA ADMINISTRATIVE TECHNOLOGY – A MEASURE OF HITTITE CONTROL?

The first part of this chapter explores the distribution of NCA administrative technology and practices outside the Hittite core region. The aim of this analysis is to identify the geographical extent and direction of this type of personalised and direct administrative interaction beyond the central region of the Hittite empire. It also seeks to explore the implications of the presence or absence of NCA texts and glyptic in geographically peripheral areas to gain insights into the nature of imperial interference and the prevailing local attitudes towards this aspect of the NCA cultural package.

At the basis of this investigation lies the observation that, although the use of seals was not restricted to the socio-political elite in the Hittite core region, archaeological find-locations in palatial, temple and other stately contexts, as well as indications of titles and professions in Luwian hieroglyphs, suggest a principle association of this type of

administrative technology with the Hittite elite in charge of state administration (e.g. Herbordt 2005, 91-92 Abb. 47 for a statistical assessment of the Nişantepe archives).

Administrative implements and evidence for their use can be representative of a number of events and practices. These may range from the exchange of correspondence or the management of a peripheral polity through imperial officials or administrative routines to the hybridisation of local bureaucratic organisation and cultural style. Seal impressions of Hittite royalty or officials in local contexts, especially in the case of isolated finds, do not on their own present convincing evidence of effective Hittite control over a settlement or territory. What they are indicative of is a direct interaction between representatives of the imperial authority and those of a peripheral polity. The quantities of text and glyptic finds as well as the professions represented may provide clues about the social level and intensity of this interaction and about the nature of the political relationship. Seal finds could be taken to imply the presence of the seal owner at a particular site, and, thus, in the case of Hittite officials, a physical as opposed to solely symbolic representation of imperial power. Seal and owner, however, are alienable, as are official allegiance and personal/factional interest, the nuances of which, however, can only be kept in mind as they are difficult to identify in the available material. More common in excavation contexts are seal impressions on bullae, sealings and cuneiform tablets, which may present the use of central Anatolian sealing practices in local contexts or, alternatively, the reception of documents or goods from sources linked to the central administration. Changes in local administrative and sealing practices to accommodate central Anatolian traditions may be indicators of political and increasing cultural ties.

The discussion of regional find-locations of NCA style glyptic, in addition to the most recent discoveries, will draw heavily on the corpus assembled by Mora (1987, 1990) up to 1987/1990 as well as Beyer's (2001) treatment of the Meskene-Emar glyptic.

Together with these works, the most recent publication of administrative evidence from Boğazköy-Hattusa by Herbordt (2005 and a commentary by Hawkins) forms the basis for this investigation. Included in the analysis are only tablets, seals or sealings with secure provenances from excavation contexts or archaeological field surveys. Museum objects of insecure provenance, whose distribution indicates a wider geographical spread of seal finds, are not taken into account for methodological reasons.

6.1.1. NCA Administrative Practice

Archaeological evidence for administrative practices from the Hittite Empire Period is concentrated in the capital city. Here, several archives, depots or magazines containing cuneiform tablets as well as sealed bullae and other sealings have been unearthed since the start of systematic excavations in 1905. They include the northern storage area of Temple 1 in the Lower City (Boehmer and Güterbock 1987), Building D on Büyükkale (Güterbock 1940, 1942; Neve 1982, 99-100), the *Westbau* on Nişantepe (Herbordt 2005) and several temples of the Upper City (Neve 1999). In addition to the capital city, seals of princes and officials of the imperial phase have come from the neighbouring sites of Alaca Höyük, Eskiyapar as well as Kaman-Kalehöyük (Yoshida 1999, 183) in Region A1. Excavations in Region A2 have yielded empire-period glyptic at Ortaköy-Sapinuwa, Maşat-Tapikka and Kuşaklı-Sarissa (Herbordt 2005, 2-3).

In central Anatolia as well as peripheral regions, the majority of LBA glyptic evidence from excavation contexts comes from seal impressions, while actual seals account for only a small proportion of the overall corpus (Güterbock 1941, Beran 1967, 13; Herbordt 2005, 3). Archival practice, which results in the accumulation of sealed objects in fixed locations on the one hand and the high mobility of personal objects on the other are likely explanations for this discrepancy (Herbordt 2005, 3). In addition to impressions on cuneiform tablets, imprints of central Anatolian seals have been found on clay bullae, sealings of various types and impressed on pottery. Following

Herbordt's (2005, 25) definition, bullae are here defined as clay cones or lumps, which were originally hung from knots or strings. Multiple bullae with impressions of contractual witnesses could be attached to tablets that were made of either clay or wood (Güterbock 1942, 4; Herbordt 2005, 32-39 Abb. 18). Sealings are clay lumps with seal impressions, which are pressed directly onto various containers from fabrics to leather (Herbordt 2005, 34-36), baskets or reed work (Müller-Karpe 1997, 110 Abb. 8,3-5; 1998, 103 Abb. 7), bottle stoppers (Müller-Karpe 1997, 110 Abb. 8,2) or unfired ceramic vessels (Seidl 1972; Müller-Karpe 1988, Tafel 48, 3 and 4). The limited textual references to sealing practices include the sealing of containers as well as of doors and city gates (Neve 1966, 24-25 Abb. 11; Otten 1983, 50-52).

Central Anatolian glyptic tradition, which is most comprehensively documented by the corpus from Boğazköy-Hattusa, underwent a series of developmental stages, providing the most fine-grained relative chronological resolution of NCA material culture (Güterbock 1940, 1942; Boehmer and Güterbock 1987; Beran 1967; Herbordt 2005). A type fossil of late imperial sealing practice is the biconvex seal (Gorny 1993), which is also frequently encountered outside the NCA cultural heartland. In addition, hemispherical or convex seals with tripod-handles were in use in the later imperial phase (*Drefußgriff* Herbordt 2005, 41-42 Abb. 20 and Abb. 21). Impressions of elongated, oval seal-rings are less prominent in central Anatolian assemblages but gained increasing popularity at Boğazköy-Hattusa and in northern Syria in the second part of the LBA (Herbordt 2005, 42-44 Abb. 24; Beyer 2001, 121-145). These seal-rings are seen as a cross-over between Anatolian stamp seals and the northern Syrian cylinder tradition, of which only few examples have come to light at Boğazköy-Hattusa (Herbordt 2005, 44-45).

The seals of Hittite officials and members of the royal family during the imperial phase have a mostly epigraphic (*Schriftsiegel*) content, as opposed to the figurative and

ornamental representations of earlier periods. The hieroglyphic Luwian inscription on these seals provides the name and often also the title and/or profession of proprietors. At Boğazköy-Hattusa, in particular the Nişantepe corpus, as Herbordt (2005, 47) observed, presents an internally homogenous group, despite the diversity of offices and professions represented. As may be expected, the glyptic evidence from surrounding regions is more diverse in terms of style and, related to it, in origin as well as chronological distribution.

6.1.2. The Distribution of NCA Administrative Technology and Practices

The following section presents a summary of the geographical and chronological distribution of NCA administrative technology and practices across Anatolia and neighbouring areas with the aim of tracing the direction and intensity of centre-periphery interactions on political/administrative levels (Table 34). Map 48 shows the find-locations of NCA glyptic and evidence for stylistic influence beyond the imperial core.

6.1.2.1. Region A3

With the exception of seals and sealings from Karahöyük-Konya (Alp 1968; Weingarten 1994) and Acemhöyük (Özgüç N. 1980), which date to the MBA and are, therefore, excluded from the present investigation, glyptic material from Region A3 stems from field survey and chance finds in museums. The most conclusive example is a fragmentary bulla from Ortakaraviran Höyük, which was discovered by Mellaart in the course of his survey of southern Anatolia (Mellaart 1954, 240; 1959, 43; Mellaart and Murray 1995, 101 Nr. 153). The impression on the bulla is that of a prince, whose name Mellaart (1954) reconstructed as Ma-sa-hu-ili-ua-s. A biconvex hieroglyphic seal in the Ankara museum was found at Zanapa in Konya province. The inscription of the seal, however, has not been conclusively read (Mora 1987, 123 Nr. 4.5.). The

impression of a seal with circular guilloche pattern was found also at Porsuk (Pelon 1992, 330 Fig. 31) in an LBA destruction context.

6.1.2.2. Region C

Evidence for LBA NCA glyptic and sealing practices on the west-central plateau comes from Gordion and most recently from Şarhöyük-Dorylaion near Eskişehir (Figure 75). A hieroglyphic stamp seal from Hisarhöyük in the Ayfon museum dates to the earlier part of the LBA (Mora 1987, p. 91 Nr. 1.1.).

From the Gordion mound and the adjacent cemetery, seal and stamp impressions on pottery as well as a bulla with parallels at the Hittite capital extend over a comparatively long time-span beginning with the MBA and Old Hittite phase (Güterbock 1980, 51 Fig. 1 and 2; Dusinbere 2005). Later examples include a hieroglyphic stamp impression on a jar handle from Level V and an unstratified impressed bulla, which cannot be read (Young 1966, 277; Güterbock 1980, 51). Impressions on pottery prior to firing make up an important part of the Gordion corpus and include a foot motif on a jar handle (Güterbock 1980, 51 Fig. 3), two jars impressed with the so-called "signe-royal" as well as a baked clay stamp with this motif from YHSS 9 (LBA I) (Henrickson 2002, 129). In addition to the impressions of actual seals, the ceramic stamps present at least a stylistic link to pre-firing pot-marking traditions at Boğazköy-Hattusa and the wider central Anatolian plateau before and during the LBA (Seidl 1972, 65-70 Abb. 1-5). As has been discussed in Chapter 4, LBA pottery from Gordion shares close connections with the NCA tradition.

A site with reported LBA pottery and other cultural links to the NCA plateau is Şarhöyük-Dorylaion near Eskişehir, where a sealed bulla was discovered in 1995 in a pit structure and among modern and LBA pottery fragments (Darga and Starke 2003, 161). The original seal was of the biconvex variety and is accordingly dated to the 13th

century BC. The hieroglyphic Luwian inscription revealed a "Prince of the Land x" as the seal owner (Darga and Starke 2003, 161).

6.1.2.3. Region D

The only glyptic evidence of this kind in coastal western Anatolia was discovered at Troy in 1995. The biconvex bronze seal was recovered from a late 12th century BC context in Level VIIb deposits and carries the hieroglyphic Luwian inscription of a male scribe and a woman, both of whose personal names cannot be read (Hawkins and Easton 1996) (Figure 75).

Further to the south, a seal stone was found recently on the acropolis of Metropolis in Ionia (Schachner and Meriç 2000) (Figure 75). The morphology of the seal and the fleeting character of the incised symbols are very different from the standard hieroglyphic seals of central Anatolia. Schachner and Meriç (2000, 89, note 10) propose a similarity between the incisions and Luwian hieroglyphs, but admit that actual identifications are difficult. A proposed local origin and the use of pseudo hieroglyphs as potential symbols of power (Schachner and Meriç 2000, 89), seems the most acceptable interpretation. It would also fit rather well with the "provincial" character of the hieroglyphic inscriptions of Suratkaya in the Latmos mountains (see below).

Glyptic evidence from LBA levels at Beycesultan is very limited and does not feature diagnostic elements of the 14th and 13th centuries BC NCA tradition. Finds from Level II include a stone stamp seal, whose closest parallels on the central plateau are dated to the MBA (Murray 1995, 123-124 Nr. 292), a broken clay bulla with two impressions of a simple stamp with an outer spiral ring and a plain centre (Mellaart and Murray 1995, 120 Nr. 208), a fragmented bottle stopper with two very eroded seal impressions (Mellaart and Murray 1995, 120 Nr. 209) as well as a cylinder seal with simple

geometric patterns (Mellaart and Murray 1995, 120 Nr. 110). A pithos rim with multiple stamp impressions of the same motif from Level I has parallels at Boğazköy-Hattusa (Mellaart and Murray 1995, 120 Nr. 210; Seidl 1972 A 61 and A 66).

6.1.2.4. Region E

In Region E, Kilise Tepe yielded four NCA biconvex hieroglyphic seals (Figure 76). Of the these, two come from stratigraphically secure contexts inside the Stele Building of Level IIb (13th century BC); the remaining two were found in association with the same structure but in less secure contexts (Symington 2001, 173). In two cases, the seal owners appear to have been without titles, while in one instance the title cannot be read. The fourth seal (KLT 93) belonged to Tarhunta-piya with the official title of charioteer (Symington 2001, 173).

6.1.2.5. Region F

The largest corpus of NCA-style seals and seal-impressions outside the northern plateau was found at Gözlu Kule –Tarsus in Cilicia. Most of the glyptic from this site comes from a pit (Goldman 1956, Nr. 36.69, Plan 24) of a transitional level that was dug into the destroyed remains of the so-called "Manager Room" of the LB IIa East House in Section B. The excavator (Goldman 1956, 59) assumed that the administrative evidence found in pit 36.69 "...must have been stored originally in the upper rooms of the substantial building, the East House, just below..." and she described its content as a "pure" Hittite deposit (Gelb 1956, 243). The difficult contextual situation of these finds aside, the content of pit 36.69 could be interpreted as the discarding of long-stored archival material which stretches over the entire LBA (see Mora 1987). A total of nine seals, eight of which are of the biconvex variety, and 56 impressions are known from Tarsus (Gelb 1956, 242). Among the finds are an impression of the seal of Isputahsu, a possible treaty partner of Telipinu and king of Kizzuwatna in the 15th century BC, a fragment of a Hittite land-grant document and a bulla with the imprint of the 13th century great queen Puduhepa (Figure 76). Several

other impressions bear the official titles of prince and/or scribes, while the majority is either impossible to read or does not feature official titles. A number of official titles and professions associated with the central administration, however, clearly point towards strong administrative links between the site and the central plateau in the 14^{th}-13^{th} centuries BC.

Of the nine seals, one biconvex example (Gelb 1956, Nr. 48) belonged to a bureaucrat/administrator with the title of scribe. Four bullae seem to have been impressed by the seals of scribes, while one bears the title prince and "great/head of the scribes" (MAGNUS.SCRIBA) (Gelb 1956, Nr. 40). Four or possibly five further bullae carry impressions of princely seals (Gelb 1956 Nos. 13, 27, 45, 53, 54 and 59), while two (Gelb 1956, Nr. 14 and 17) belonged to female counterparts. One bulla shows the possible impression of the seal of a charioteer (Gelb 1956, 250 Nr. 30).

Herbordt (2005, 22) has recently pointed out that some of the personal names of officials from the Tarsus corpus can be matched with those of the Nişantepe archive. The most prominent of these is Sahurunuwa, who carried the title prince and "great/head of the scribes" (Gelb 1956, 250 Nr. 40) and who is likely to be the same person as the head of the wood-tablet scribes and bearer of several other titles, as well as a witness to Hittite treaties (Herbordt 2005, 82).

Other stratified NCA glyptic finds from Region F include a seal impression on a pottery vessel and the imprint of an LBA I seal on a clay bulla from Soli Höyük (Yağcı 2003, 94. 101 Fig. 3 and 4.). The biconvex seal of a Ka/ga-zi-zi was found in the newly excavated steptrench at Yumuktepe-Mersin (Sevin and Köroğlu 2004, 75-76 Fig. 3).

6.1.2.6. Region G

The second largest peripheral corpus of LBA NCA glyptic was discovered at Korucutepe (Figure 76). The first excavation expedition found 12 sealed bullae and one flat sealing of officials and persons with royal titles in a pit context in section O21 (Güterbock 1973, 135). Subsequent Turkish excavations between 1973 and 1975 uncovered an additional hematite stamp seal (Emre 1988 Kat. 1), three biconvex seals (Emre 1988 Kat.6; Kat. 8 and Kat. 9) as well as several seal impressions (Emre 1988 Kat. 12; Kat. 13 and Kat. 14) in association with an LBA house structure and along the, probably earlier, fortification wall. The evidence from Korucutepe points towards administrative activities at the site comparable to those on the central plateau, although sealing could have also taken place elsewhere. Another contemporary pit structure yielded a cylinder seal of Mitannian type (Van Loon 1978, 40 Nr. KRC 68-448).

Güterbock (1973, 136-141) identified several royal seal-owners among the Korucutepe impressions, including Ari-Sarumma (Güterbock 1973 and 1980 Nr. 1-2), king of Isuwa (Figure 76.7). A third impression was identified as Ari-Sarumma's successor, Ehli-Sarumma (Güterbock 1973 and 1980 Nr. 3) (Figure 76.8). The reading of the latter name, however, was challenged recently in favour of Ali-Sarumma, who is not a royal figure, on the basis of new glyptic evidence (Hawkins 2005, 252 Nr. 99-103). In addition, Güterbock (1973, 136-140) read the second hieroglyphic name and title on the Ari-Sarumma seal as that of Kiliushepa, queen of Isuwa. Both Ari-Sarumma and Kiliushepa are known from cuneiform sources as contemporaries of Tudhaliya IV, and Ari-Sarumma appears as a witness in the Ulmi-Tesub treaty (Klengel 1968, 71; 1974). The seal impression of a prince with the name of Ari-Sarumma was found in the Nişantepe corpus (Herbordt 2005, 79). The textually attested son of Ari-Sarumma, Ehli-Sarumma, is thought to be represented in the Boğazköy-Hattusa material by a bulla impressed with the seal of a prince of the same name who was part of the palace personnel (Herbordt 2005, 79; Hawkins 2005, 252 Nr. 99-103).

Two persons bearing the titles of princes are attested at Korucutepe (Güterbock (1973, 141-142 Nos. 4 and 5) (Figure 76.10 and 11), one of which can be read as Sausga-ziti. A stamp seal found by the Turkish excavation in association with an LBA house structure, belonged to a scribe, whose name was read ZITI-*à* (Ertem 1988, 5 Kat. no. 1). In addition, the personal names of Lupakki and Luwa (Güterbock 1973, 142 Nr. 6 and 7) find parallels in two scribes known from Boğazköy-Hattusa in the 14th century BC. Herbordt (2005, 77), however, argued against an identification with the Korucutepe persons on chronological grounds and the late LBA II finds context of the Korucutepe material. The pit context and the effect of possible archival activities, however, do not necessarily exclude a connection between these persons. In addition, a sealed bulla (Emre 1988, Kat. no 14) from Korucutepe also mentions the name Sarissa and thus presents a connection with the central Anatolian administrative centre of Kuşaklı-Sarissa (Mielke 2006a, 155).

At the neighbouring site of Norşuntepe, one seal and one impressed bulla were found during excavations in 1969 in respective LBA and IA contexts; two further seals in the local museum may also stem from the site (Wälfler 1974, 100-101) (Figure 77). One of the latter seals belonged to Pihaziti, a scribe, whose personal name at least is also known from Boğazköy-Hattusa (Wälfler 1974, 100 Tafel 80/1; Mora 1987, p.183 Group VII Nr. 6.11; Hawkins 2005, 268 Nr. 312-316).

Two additional seals, one stamp and one biconvex, come from the neighbouring site of Tepecik (Figure 77). The first is dated to the early part of the imperial phase in the late 15th-early 14th century BC, while the second seal may belong to either the 13th or the 12th century BC (Esin 1971, 123-124; Mora 1987, p. 94 Group IV Nr. 1.8.; p.330 Group XIIb Nr. 2.18.). To date, no stratified LBA glyptic evidence has been found at Arslantepe, but Meriggi (see Mora 1987) published a number of seals and seal impressions from surface investigations and chance finds in the province of Malatya.

Overall, the geographical entity here defined as Region G2 appears to have had relatively strong administrative connections with the central Anatolian plateau during the LBA and in particular the 14th-13th centuries BC. Besides the use of NCA seals and sealing practices, the probable identification of persons from seal impressions in Region G2 with individuals known from cuneiform texts and/or glyptic in the capital city corroborate the impression of rather firm bureaucratic links as well as the exchange of cultural practices.

6.1.2.7. Region H

On the Euphrates downstream, two biconvex seals with Luwian hieroglyphic inscriptions were recovered in a deep sounding at Tille Höyük (Collon 1993, 173, 177 Fig. 5 and 6). Both inscriptions are heavily worn but one seal may feature the names of a male and female owner on its respective surfaces (Figure 77.6). The second seal could not be read (Figure 77.7). It was discovered in the same layer as the Mycenaean III A/B sherd. A further, non-inscriptive stamp seal depicts a chariot-scene typical for the LBA II East Mediterranean tradition (Collon 1993, 173, 177 Nr. 7).

A final LBA/EIA building at Lidar Höyük yielded two bullae with seal impressions of Kuzi-Tesub, the last king of Carchemish and founder of the EIA dynasty of Malatya (Sürenhagen 1986) (Figure 78). In the same building two pithoi and a limestone figure with incised marks resembling the Luwian hieroglyphic sign "king" were also found (Littauer, Crouwel and Hauptmann 1991, 351). To the west, four biconvex seals were recovered at the site of Tilbeşar, although none of the seals that could be read carried official titles (Mora 1987, p. 139 Group IVa Nr. 3.3.; p. 176, 180 Group VII Nr. 4.7. and 6.2.; p. 258 Group XI Nr. 1.4.).

6.1.2.8. Region J

NCA glyptic evidence from Carchemish, the Hittite viceregal seat in charge of the administration of northern Syria, is very limited due to the lack of exposure of LBA

levels. The role of Carchemish in the government of northern Syria is attested much more extensively in the archives of subordinate polities such at Ras Shamra-Ugarit and Meskene-Emar (see below). A total of three securely attributed seals are listed by Mora from the site (1987, p. 117 Group V Nr. 2.5.; p. 144 Group VIa Nr. 4.3. and p. 267 Group XI Nr. 3.5.). The first of these probably dates to the 15th-14th centuries BC (Mora 1987, p. 117 Group V Nr. 2.5.), while the other two biconvex examples belong to either the 13th or the 12th century. Two additional biconvex examples were found during excavations at the 1st millennium BC cemeteries of Deve Höyük in the vicinity of Carchemish (Mora 1987, p.151 Group VIb 1.17.; p.315 Group XIIb 1.56.).

About ten seals and impressions of NCA-style are known from Tell Atchana-Alalakh, of which two seals belonged to a prince and palace official (REGIO.DOMUS) called Pa-lá/i/u-wa/i (Mora 1987, p. 288 Group XIIa Nr. 2.21.; p. 311 Group XIIb Nr. 1.40.). The site also yielded two Hittite language cuneiform tablets (Wiseman 1953, Nos. 317 and 454).

By far the richest evidence for interaction on a specific administrative level between a coastal Syrian polity and its overlords at Hattusa and Carchemish was found in the archives of Ras Shamra-Ugarit. A variety of cuneiform documents, including vassal treaties, tribute lists, edicts and letters (Nougayrol 1956; Schaeffer 1956) attest to a close political relationship between this polity and the Hittite empire during the 14th and 13th centuries BC. In contrast to the abundant evidence for its political links, which make up a textbook case of hegemonic control, there is very little in the form of NCA administrative technology or practices to be found at the site (Neu 1995, 124-125). The day-to-day administration of the kingdom was firmly in the hands of local bureaucrats with their traditional administrative routines (Herbordt 2005, 30, Note 218).

NCA hieroglyphic stamp impressions and imprints of cylinder seals of the so-called "Syro-Hittite" style are found chiefly on cuneiform tablets at Ugarit. They comprise impressions of four generations of the Hittite ruling dynasty, from Suppiluliuma I to Tudhaliya IV, as well as kings Ini-Tesub and Talmi-Tesub of Carchemish (Mora 1987, 193-218; Group VIII; Herbordt 2005, 29-30). Lower-ranking officials are also attested though their seals on clay tablets. These include princes and scribes or a combination of the two, such as Naninzi/Mahhuzi, who is attested also at Boğazköy-Hattusa (RS 17.109; Herbordt 2005, 81).

The glyptic evidence from Ugarit and from Meskene-Emar (see below), illustrates the existence of two parallel sealing traditions in LBA northern Syria. Ini-Tesub, the viceroy of Carchemish, for instance, used both a stamp and "Syro-Hittite" (hieroglyphic) cylinder seal on his edicts and correspondence. Tudhaliya IV was the first Hittite great king to have used a cylinder seal parallel to the traditional royal stamps (Herbordt 2005, 44-45). A gradual adoption of the hybrid "Syro-Hittite" cylinders and oval seal rings by bureaucrats but also private individuals is attested at Meskene-Emar and other sites in northern Syria. In contrast, neither Ugaritic officials nor civilians seemingly showed any interest in Anatolian or hybrid forms (Neu 1995, 124; Herbordt 2005, 31).

Among the few possible NCA glyptic finds from Ras Shamra-Ugarit are a golden hieroglyphic seal-ring of a woman found on the south acropolis (RS 24.145, Galliano and Calvet 2004, Nr. 76), a hieroglyphic biconvex seal from the harbour area (RS 2.[035], Galliano and Calvet 2004, Nr. 77) as well as a much debated chlorite seal of great king Mursili II from the royal palace (RS 14.202, Galliano and Calvet 2004, Nr. 74). The authenticity (Schaeffer 1956, 87-93) of the latter seal, and with it the presence of a Hittite chancellery at Ugarit, however, is questionable due to mistakes in both the cuneiform and hieroglyphic Luwian text (Neu 1995, 124-125).

Administrative connections between the city of Meskene-Emar and the kingdom of Astata with the Hittite empire differed substantially from the relationship with Ugarit, both of which were nodal points for inter-regional trade, in the type of control exerted by the imperial centre, the socio-political circumstances of interaction and the perception of the local society of itself and its overlords.

A total of ca. 1170 cuneiform tablets have been found at Meskene-Emar to date and around 800 examples contained impressions of 350 to 400 original seals dating from the 14th to the early 12th centuries BC (Beyer 1987, 29-30) (http://www.uni-tuebingen.de/emar/en/history.html). The existence of two parallel administrative systems at Meskene-Emar is illustrated by two clay tablet formats (Figure 79 and Figure 80) and the respective use of local "Syrian" and hybrid "Syro-Hittite" cylinders, Anatolian stamps, or oval seal rings on these two tablet types (Beyer 2001) (Figure 78). About sixty percent of tablets belong to the "Syro-Hittite" category (Herbordt 2005, 31-32). Differences with NCA administrative practices include the very limited number of sealed bullae and sealings at both Meskene-Emar and Ras Shamra-Ugarit, while the number of sealed cuneiform tablets from the imperial capital is minute in comparison to Syrian archives (Herbordt 2005, 31).

Direct links between Meskene-Emar and the Hittite administration can be established through the numerous attestations of four generations of Hittite viceroys at Carchemish (Beckman 1995b, 27, note 54). Unlike at Ugarit, however, great kings of the Hattusa dynasty, with the exception of a retrospective mention of Mursili II, are not represented in the textual or glyptic material of Meskene-Emar (Beckman 1995b, 31). Imperial and local levels of administration appear to have overlapped in certain respects, with civil and military officials in the service of the court at Carchemish functioning as witnesses in local legal contracts. In some cases, the same persons are also attested at Ugarit. Besides the local king and his administrative corps, a Hittite official with the title

"overseer of the land" was in charge of the kingdom of Astata. This role involved duties comparable to those of the BEL MADGALTI of central Anatolian border settlements (Beckman 1995b, 28; see Chapter 3). The largest group of imperial and local officials, however, were scribes, whose personal names suggest Hurrian and West Semitic and, thus, local origins. Nevertheless, these bureaucrats alongside private individuals used hieroglyphic Luwian on their seals (Beckman 1995b, 30; Herbordt 2005, 31).

In a recent article, Cohen (2005) pointed out that the uptake of Anatolian or Syro-Anatolian glyptic style and practices during the LBA is most evident in the semi-official archives of private families, where cultural influences are felt in the script as well as legal procedures (Faist 2002). Conversely, documents related more directly to the royal household continued to display conservative, local Syrian traits. The social context of this cultural change at Meskene-Emar may, thus, have been a private or semi-official one, which raises a whole host of questions about the nature and social location of cooperation with imperial powers and the potential advantages high-ranking, but politically underrepresented, families may have gained from emulation. In this way, the evidence from Meskene-Emar underlines the factional character of peripheral societies that provides an important foothold for imperial agendas within the local social, cultural and political fabric.

The LBA stronghold of Tell Faq'us, situated in viewing-distance from Meskene-Emar on the Euphrates downstream, yielded the impression on a bottle stopper of the hieroglyphic seal ring of a "great/head of the charioteers", a Hittite high official (Margueron 1982, 61; Mora 1987, p. 252 Group X Nr. 2.8.)

Further downstream, a large bulla with eight impressions of the combined seal of Hattusili III and Puduhepa was found in the destruction debris in Level IV at Tell Fray (Archi 1980b, 31-32 TAV. I:1-2; Matthiae 1980, 38). On the pavement of a house,

fragmentary Middle Assyrian administrative and judicial tablets were recovered with palaeographic characteristics suggestive of the first part of the 13th century BC (Matthiae 1980, 38-39). In addition, pre-firing incisions of the scribe Simigatal in hieroglyphic Luwian are attested on three storage vessels at the same site (Archi 1980b, 32 TAV. I: 3-4 and II: 5-6).

An individual stamp seal of the 15th century BC was found at Terqa (http://www.iimas.org/Terqa.html). Further inland, three impressions of a hieroglyphic stamp seal were recovered at Tell Mardikh-Ebla (Archi 1980c) and five biconvex examples come from Hama in the Homs valley (Mora 1987, Group VIb Nos. 1.25. and 1.26; Group VII Nr. 4.15.; Group XI Nr. 3.6.; Group XIIb Nr. 3.8.).

Further Anatolian glyptic evidence derives from Tell Kazel in coastal southern Syria, with a late 13th century biconvex seal (Mora 1987, 268 Group XI Nr. 3.10). One of the most southern examples of NCA glyptic derives from LBA II levels at Megiddo. The seal belonged to Anu-ziti, who carried the title of charioteer (Singer 2002). During the 13th century BC, the site of Megiddo functioned as a way station for officials travelling to and from Egypt and Singer (2002, 146) proposed that Anu-ziti was such an envoy. A further link between the site and the Hittite empire is an ivory plaque in NCA iconographic style (Alexander 1991). Tell Aphek has also yielded a fragmentary impression of the seal of a prince (Mora 1987, 125 Group V Nr. 5.2), while two hieroglyphic seal rings were found at Tell el-Far'a S./Tel Sharuhen (Mora 1987, p. 249-250 Group X Nr. 1.6. and 2.3.).

A tripod stamp (Mora 1987, p.118 Group V Nr. 3.2.) and a biconvex seal (Mora 1987, p. 143 Group VIa Nr. 3.12.) come from Tamassos and Hala Sultan Teke on Cyprus. Both seals carry Luwian hieroglyphic inscriptions, and the seal from Hala Sultan Teke seemingly belonged to a scribe.

6.1.3. NCA Glyptic in Surrounding Regions – Preliminary Conclusions

The above discussion has demonstrated that NCA seals and sealings as well as glyptic style, which tend to be closely associated either with Hittite officials or administrative practices, display a clear geographical and chronological focus that is indicative of direct imperial-local interaction, although on different administrative/bureaucratic levels.

While only a very limited number of NCA seals and seal impressions have been found to the west and south-west of the Hittite core region and to its north, the vast majority of 14th and 13th century glyptic and tablet finds concentrate in areas to the south and south-east. The nature of these discoveries within Anatolia, in particular the pit contexts at Tarsus and Korucutepe, poses the question whether we are dealing with chance finds that have not yet been made at western sites due to a lack of archaeological work or limited exposure of relevant levels. If the present distribution patterns are, as they would nevertheless seem, remnants of real differences in regional interaction, a possible explanation, besides the absence of effective, administrative control in western and northern areas, may be to do with prevailing local conditions. Areas to the south and south-east, and particularly vassal states in northern Syria, fulfilled requirements of literacy and familiarity with complex administrative procedures necessary to appreciate and, thus, render effective, in practical and ideological terms, the use of imperial administrative technology and, in some instances, that of procedural practices.

The observed patterns of imperial glyptic and texts at the four major find-spots of Tarsus, Korucutepe, Ras-Shamra-Ugarit and Meskene-Emar, suggest the operation of at least three different modes of inter-regional administrative interaction involving geographically as well as hierarchically distinct segments of the imperial authority. The first includes the two Anatolian settlements of Tarsus and Korucutepe. At both sites

contact with the imperial core is attested by the local use of NCA administrative technology during the imperial phase but also stretching back into the pervious period in the case of Tarsus. In addition, at both sites parallels can be found between persons represented on local seal impressions and at the imperial capital. Some of these persons carried either royal titles or fulfilled official functions. The majority of glyptic finds at these two sites are sealed bullae, administrative devices attached to writing tablets or containers, documented also in large quantities at Boğazköy-Hattusa, which suggests similarities in administrative practices.

In contrast, the two major Syrian find-locations of NCA glyptic have yielded exceedingly little archaeological evidence for the use of clay bullae in administrative procedures. In all other respects, however, the administrative connections and, as a consequence, the political and cultural relationships between the two Syrian cities and the Hittite realm share very little in common.

Two scribal schools (Beyer 2001) apparently mastered the practicalities of administration at Meskene-Emar. One adhered to traditional Syrian tablet formats and glyptic styles, while the second presents a hybridisation of Anatolian and Syrian traditions. The Hittite viceroy at Carchemish and his officials are represented in the Meskene-Emar texts as involved in local legal decisions and as witnesses to contracts, while a Hittite administrator, "the overseer of the land" was in charge of the entire land of Astata (Beckman 1995b, 28). The main dynastic line of Hattusa, with the exception of Mursili II, however, is not found in the glyptic or the written records of Meskene-Emar.

In contrast to Emar and the Land Astata, which were seemingly in close contact and under constant administrative scrutiny of officials working for the Hittite imperial venture, Ugarit's leadership communicated directly with the imperial court at Boğazköy-

Hattusa. Large numbers of treaties, edicts and letters attest to the rather more frequent interference of the Hittite great-king in local affairs. Yet, while numerous tablets carry the seals of Hittite royalty and officials, which relate to political and legal matters, local scribal tradition and administration did not adopt NCA glyptic styles or hybrid versions of it. Thus, while Ugarit was under highest-level political control and was interfered with in exceptional circumstances, Emar appears to have been more directly administrated by the Hittite authorities at Carchemish. Geopolitical considerations and prevailing local conditions must have influenced these arrangements. On the one hand, the involvement of Ugarit in Mediterranean trade and its political and economic self-assurance kept the attention of the Hattusa dynasty focused on this port city, while its local royal family and bureaucratic corps were clearly capable of self-administration. On the other hand, an increasingly precarious military situation on the Euphrates as well as the apparent lack of a long-standing local kingship tradition at Emar (Beckman 1995b, 29) required a more direct approach.

The archives of the capital city have yielded numerous texts in the form of treaties and correspondence attesting to a close political relationship with regions to the south and south-east, in particular northern Syria. The *Catalogue des Textes Hittites* (Laroche 1971; www.asor.org/HITTITE/CTHmaindir.html) contains over 30 political or administrative texts such as treaties, letters and edicts that illustrate the political relationship between the Hittite empire and a number of Syrian states. It is notable that all correspondence and treaties with Ugarit and Emar were found in local archives. Kizzuwatna, with nine political documents, is the next best attested peripheral polity in Hittite archives. Six political/administrative texts concern countries and individuals in western Anatolia. Only a very limited number of documents found at Boğazköy-Hattusa contained the seal impressions of subordinate rulers (Herbordt 2005, 44).

This overview of evidence for NCA administrative technology in peripheral regions has provided a clear chronological and geographical distribution pattern indicative of close political/administrative relations between the Hittite centre and its southern and south-eastern dependencies as well as an almost complete absence of such interaction with the western part of Anatolia. From the limited evidence available at present, however, it has also become clear that political relations with south and south-eastern polities differed rather dramatically and that some appear to have been more receptive to cultural influence and administrative practices, while Ugarit in particular remained fiercely independent in this respect. As we shall see in the following section, the distribution pattern of Hittite administrative effort and control differed dramatically from that of its ideological projections of power in the form of landscape monuments.

6.2. Monuments in the Landscape – Projections of Imperial and Local Power

Rock reliefs and related monuments are the most prominent material culture expressions of claims to power by Hittite and local Anatolian sovereigns and those with such aspirations in a landscape contexts. In this way, landscape monuments provide a complementary perspective on imperial-local interaction on the highest social and political levels to those represented by, and enforced though, administrative technology. The spatial and chronological distribution of such representations allows us to glimpse an ideological struggle in the appropriation of territory and marking of boundaries, which spatially resonates but does not entirely overlap with patterns of cultural influence (Chapter 4) and changes in spatial organisation indicative of imperial control (Chapter 5).

The focus of this section rests on the broader picture and the information that the geographical and chronological distribution of these monuments as well as the identities of their patrons can provide on the processes of establishment and projection as well as the challenge and disintegration of effective control. Conversely, this chapter

is not intended to provide a comprehensive presentation of the available evidence and the intricacies of art historical and philological debates that have developed around some of the monuments in question. These issues have recently been summarised by Ehringhaus (2005; also Bittel 1976; Börker-Klähn 1982;Kohlmeyer 1983; Hawkins 1995, 1998, 2000; Emre 2002).

In the past, LBA landscape monuments, which include figurative reliefs, inscriptions, dams and reservoirs from across Anatolia, have tended to be treated as a diverse, yet coherent, category of mainly art historical and philological interest (see e.g. Akurgal 1964; Bittel 1976; Kohlmeyer 1983, Hawkins 1998, 2000; Ehringhaus 2005). Past research agendas, while providing the invaluable basis for the present investigation, have usually limited their approaches to analyses of immediate pictorial and epigraphic content, group internal comparison and chronological contextualisation through text-historical sources. From these investigations, a consensus of strong stylistic homogeneity has emerged for LBA monumental sculptures whose epicentre seemingly was the NCA plateau and, more specifically, the Hittite capital city and its surroundings. Akurgal (1964, 103), for instance, proposed the existence of a limited number of workshops to explain the apparent canon in visual representation. More recently, Emre (2002, 233) stated that regardless of their places of discovery within or outside the Hittite cultural core region, these reliefs present forceful expressions of Hittite culture:

> *Unabhänging davon, ob sie [Felsmonumente] im Kerngebiet der hethitischen Kultur oder außerhalb, etwa in Karabel, entdeckt wurden, präsentieren sie markant den Stil der hethitischen Kunst.*
> (Emre 2002, 233)

Kohlmeyer (1983, 103), while rejecting Bittel's (1976, 191) idea of a central Anatolian "school of sculpture" on the basis of limited evidence, envisaged the dissemination of stylistic influence from Boğazköy-Hattusa in unison with Hittite imperial expansion and reflected in the geographical distribution of the monuments.

Following this path of reasoning, monuments both from the core region of the Hittite state and its peripheries have tended to be uncritically referred to as "Hittite" (e.g. Börker-Klähn 1982, 88; Emre 2002; Ehringhaus 1995a,b; Mellaart 1962 for a similar criticism but from a different angle) or as of "the Hittite Empire Period" (Kohlmeyer 1983; Ehringhaus 2005). Such labels are arguably correct in a number of cases, which, by virtue of accompanying Luwian hieroglyphic inscriptions, can be attributed to Hittite great kings (Sirkeli 1, Fıraktın, Yazılıkaya, Yalburt and Karakuyu) or related officials (Taşcı A). The extension of the term "Hittite", in both its cultural and political connotations, to less easily identifiable monuments on the basis of stylistic similarities, however, masks a crucial diversity of authorship and, associated with it, of multiple ideological and political intentions in the power-political playing field of LBA Anatolia (Chapter 3 for a discussion of the term "Hittite").

It has to be pointed out that with the exception of a short overview by Emre (2002) and Ehringhaus' (2005) comprehensive summary *Götter, Herrscher, Inschriften: Die Felsreliefs der hethitischen Großreichszeit in der Türkei*, all other comparative treatments of the subject were published prior to four recent discoveries, which have emphasised the significance of landscape monuments of NCA-style as alienable political tools. These include the discovery of the rock relief and inscription of Kurunta, (great-)king of Tarhuntassa, at Hatip (Dinçol 1998), the conclusive reading of the Karabel A inscription as that of Tarkasnawa, king of Mira (Hawkins 1998), the discovery of a second relief at Sirkeli in Cilicia (Ehringhaus 1995a, 2005, 100-101) as well as hieroglyphic incisions of several local princes in the Latmos mountains in south-west Anatolia (Peschlow-Bindokat 2001; Herbordt 2001).

Pictorial themes, inscriptions and natural surroundings in the form of springs, mountains and communication channels have directed past interpretations of LBA landscape monuments and their functions in various directions. The religious subject

matter of some of the reliefs (e.g. Yazılıkaya, Fıraktın or Gâvur Kalesi) and their frequent association with springs or watercourses have tended to produce interpretations with a focus on their religious/cultic significance and function (e.g. Bittel 1976, 193-95; Kühne 2001). Börker-Klähn (1982, 88-89), however, has poignantly asserted that, although such identifications are clearly justified in some cases, they need not be widened to include the entire corpus. Alternative interpretations stress political motives as incentives for the carving of rock monuments at or near natural barriers or thoroughfares. The reliefs of Karabel, Hatip, Sirkeli, Hamite and Keben have been interpreted as border and way markers by some scholars (e.g. Börker-Klähn 1982; Hawkins 1998; Ehringhaus 2005, 106-108).

The majority of LBA landscape monuments, from rock reliefs to water reservoirs, are likely to have been invested with and conveyed multiple meanings by virtue of their material presence in specific places in the landscape and through the practices that may have occurred around or within them. Whatever the primary meaning of depicted scenes and practices of processions or rituals, through their very monumentality and association with political and, at the same time, religious leadership, they are aspects of strategies of power, or of propaganda as Börker-Klähn (1982, 101, 104) put it.

The major questions are, thus, *whose* propaganda is conveyed and *for whom* it was intended. Striking in the list of landscape monuments discovered to date is the significant number of examples that name and/or portray officials, princes and local kings in comparison to those directly related to the main imperial dynastic lineage (Table 35). Although links to the Hittite imperial administration can be established for some of the authors of such monuments through textual or glyptic syncretisms (e.g. Herbordt 2005; Hawkins 2005), these, sometimes contingent, connections with the Hittite centre, are not straightforward confirmations of the assertion of imperial power on peripheral territories, as is seen to be the case, implicitly or explicitly, in past

treatments of the subject (e.g. Kohlmeyer 1983, 103; Peschlow-Bindokat 2001, 366; Ehringhaus 2005, 119-120).

The most incontrovertible evidence for a power-political discourse, which was carried out, among many strategies, via the media of monumental rock sculptures is the relief of Kurunta, (great)-king of Tarhuntassa. The problematic relationship between Kurunta and the main Hattusa lineage is detailed in various cuneiform sources as well as the hieroglyphic Luwian inscriptions at Yalburt. Among all Hittite great kings, Tudhaliya IV in particular appears to have invested in representational monuments at Boğazköy-Hattusa, the nearby Yazılıkaya and on the fringes of the central Anatolian plateau. As Ehringhaus (2005, 119) pinpointed, Tudhaliya IV seems to have been under pressure to underwrite the legitimacy (*Legitimierungsdruck)* of his rule in this way.

By the same token, it can be argued that all monumental representations in peripheral regions are borne out of similar pressures of or aspirations to legitimisation. In other words, LBA rock reliefs and inscriptions can be interpreted as projections of centralised power and claims over territories via their boundaries and access routes rather than as manifestations of achieved centralised control. Examining monumentality in Vijayanagara India, Morrison and Lycett (1994) have convincingly argued that monumental statements of power served the assertion of centralised authority rather than the commemoration of its achievement. In view of both the large number of monuments apparently commissioned by princes and local kings as well as textual references to incessant upheavals and subsequent military campaigns across Anatolia, I propose that despite potentially close familial and/or contractual ties with the Hittite core, representations or inscriptions of princes and local rulers should be viewed as evidence for power-political discourses among local factions and between peripheral and central forces.

Mann (1986, 144-145) has pointed out that centralised power lies in the hands of the king and his marching army during campaign, while post-conquest integration leads, invariably, to the dispersal of power to lower-ranking officials, often drawn from the royal family or aristocracy (Chapter 2). Imperial integration and decentralisation go hand-in-hand and ultimately may lead to the disintegration of the system. Monuments of Hittite officials and princes along the major communication routes from the plateau to Cilicia and south-eastern Turkey may point towards centrifugal processes of this kind.

From this perspective, the use of an NCA iconographic canon by local agents, rather than a sign of central authority, can be interpreted as a form of emulation of central power strategies; the transformation of the power inherent in imperial style onto peripheral leaders to enhance their own status *vis-à-vis* local competitors or the imperial authority itself. Higginbotham (1996, 2000) has demonstrated that kingdoms in Syria-Palestine under hegemonic Egyptian rule blended Egyptian style with local subject matter in various material categories as part of a local power-political discourse. Conversely, the use of imperial stylistic elements alone need not imply automatically any form of political dependency, as is demonstrated by strong Egyptianising elements in northern Syrian states under Hittite rule.

One defining element of elite emulation strategies in the Syro-Palestinian realm is the hybridisation of regional styles. A limited corpus, long-standing cultural exchanges among Anatolian regions and the scarcity of evidence for local pictorial styles, do not permit a detailed analysis of this kind in the present case. Elements of "provinciality", and local specialities, however, can be observed in some of the depictions. These are discussed in the following section, which presents a short description of each of the monuments in question (Map 49)

6.2.1. Representations and Inscriptions of Hittite Great Kings

6.2.1.1. Urban Settings

The majority of stone sculptures, carvings and monumental inscriptions with direct associations to settlement contexts are concentrated in the Hittite capital itself and the neighbouring Alaca Höyük. At both sites stone carvings partook in the structuring of circulation within the urban space and served to control the interstitial realm between the city and its hinterland (Börker-Klähn 1994; Beckman 1999). Numerous portable stone carvings such as stele and orthostats were unearthed in or near temples and houses in the Upper City (Neve 1999, 2001) and the citadel of Boğazköy-Hattusa (Emre 2002, 219). These monuments stretch over a relatively long chronological span from the proposed 15th-14th centuries BC date for the Alaca Höyük reliefs (Bittel 1976, 204-205, 208; Neve 1994) to the later imperial phase of the gate sculptures at Boğazköy-Hattusa (Bittel 1976; Neve 2001; Emre 2002, 223). Two large relief orthostats as part of a monumental entrance to Building D were recently discovered at Ortaköy-Sapinuwa. The better preserved relief shows the lower half of a male warrior/god and fragments of hieroglyphic inscriptions are also mentioned in short preliminary reports (Süel 2004; ArkeoAtlas 2004, 60). A stone stele with a Luwian hieroglyphic inscription was found in situ at Karahöyük-Elbistan (Özgüç and Özgüç 1949; Collins 2005, 26-27). The first excavation season at Kayalıpınar is also reported to have yielded a stone sculpture (Hawkins personal communication 01.04.2006).

Large-scale stone carvings within the city walls of Boğazköy-Hattusa include the hieroglyphic inscription of Suppiluliuma II at Nişantepe and the southern castle (*Südburg*). The *Südburg* complex consists of two vaulted chambers, the better preserved of which shows two male figures, conventionally interpreted as the sun-god and Suppiluliuma II, as a warrior in association with hieroglyphic inscriptions of three military campaigns and building projects of the same king (Hawkins 1995). A stele

depicting Tudhaliya IV in the same warrior style was found in House A near Temple 5 in the Upper City (Neve 1993, 35-36; Ehringhaus 2005, 33).

6.2.1.2. Reliefs with Associated Architectural Features

Closely related to the capital city are the multiple rock reliefs of Yazılıkaya, which formed part of a sacred complex blending together the landscape features of a rock outcrop with built structures of the imperial phase (Bittel et al. 1975). In the folds of the rock, several chambers with a series of divine processions are depicted. Interpretations range from the location of the New Year's festival to royal mausoleum (Ehringhaus 2005, 17). In addition to divine representations, great king Tudhaliya IV is shown in two large-scale reliefs and identified through hieroglyphic aediculae. The site itself, however, was in use prior to the relief carvings and architectural additions.

Monuments blending together natural and built features outside the core area can be linked with differential certainty to the imperial dynasty. In geographical terms, such monuments are located on the western (Region C1 and A3/C2) and the eastern fringes of the central Anatolian plateau (Regions A2/G1 and F). They include representations and inscriptions in association with structures designed for the capture and storage of water as well as on natural rock faces with related architectural remains.

6.2.1.2.1. Yalburt

The rectangular pool construction of Yalburt (Figure 81 and Figure 82) is situated in a natural depression at the north-eastern foot of a hill amidst the solitude of an upland pasture south of the Gölcuk Dağı and to the north of the modern town of Ilgin. On the inside of the pool, measuring 12.6 x 8.45 m (Ehringhaus 2005, 37), the military victories and other activities of Tudhaliya IV in the west and south-west of Anatolia are detailed (Hawkins 1995, 66-85).

The location of the site offers a view to the south where several major routes lead into western Anatolia and into the lake region of classical Pisidia. These are also the areas that form the subject matter of the inscriptions and one cannot help but ask why Tudhaliya choose to commemorate his achievements not within their appropriate geographical context further to the south or south-west. Possible reasons may be to do with the target audience for his propaganda. Perhaps the lack of receptivity of southern populations for imperial propaganda and, by extension, the lack of effective imperial control over these areas may have influenced his choice of a safer environment?

Trial trenches at the site and the adjacent hill revealed no LBA materials (Ehringhaus 2005, 45), although a visit to the site (15.06.2006) yielded at least one piece of 2nd millennium BC pottery (also Bahar and Koçak 2004, Nr. 106.12). Extensive field survey conducted by Bahar in the surroundings of Yalburt, located a number of 2nd millennium settlements (Chapter 5).

6.2.1.2.2. Monuments near Köylütolu

To the south-east of Yalburt, a stone block with a longer hieroglyphic inscription was found near the village of Köylütoluyayla in association with an ancient dam construction (Starke cf. Ehringhaus 2005, 74). The inscription contains the edict of a great king concerning the town Tatara/ima and a prince Sauskakurunti, whose seal impressions are known from Boğazköy-Hattusa (Hawkins 1998, 9 note 23; 2005, 271 Nr. 373-381). Despite the absence of a personal name in the inscription, Tudhaliya IV has been inferred as the great king issuing this edict by several authors (Hawkins 2006, 62-63 for a discussion).

Further to the west, at the village of Beyköy near Ayfon, a now lost stele with hieroglyphic inscriptions was reported by Ramsay. Gonnet (1981, 181-183) investigated four settlement mounds as well as a number of rock monuments in the

area around Beyköy in 1979. All four mounds apparently yielded LBA sherd material and a number of stone "thrones" and "cup-marks" were identified as aspects of NCA ritual traditions (Gonnet 1981; 1994, 76-77). Gonnet disagrees, however, with Steinherr about the identification of a badly eroded rock carving with a "Hittite" winged sun-disk (Gonnet 1981, 181; contra Ehringhaus 2005, 35-36).

6.2.1.2.3. Emirgazi Altars

A total of six stone stelae in a shape generally referred to as altars were found at Emirgazi on the southern central plateau. All stelae are covered in almost identical hieroglyphic Luwian inscriptions which attest to a direct association with Tudhaliya IV (Hawkins 1995, 86-101; 2006, 54-62).

6.2.1.2.4. Altınyayla

A further stele depicting a libation scene in front of a god on a stag was recently discovered near Kuşaklı-Sarissa (Müller-Karpe 2003). Although it bears no hieroglyphic inscriptions and was found in secondary context, Hawkins (2006, 62-64) has connected its iconographic theme with the stag and weather god cult of Tudhaliya IV and with the cult activities of the town Sarissa. A small inscribed stele from Delihasanlı is also interpreted as an expression of Tudhaliya's mountain-top cult of the stag-god (Hawkins in Seeher 1996; Hawkins 2006, 63).

6.2.1.2.5. Eflâtun Pınar and Fasıllar

The pool complex of Eflâtun Pınar (Figure 83) is located ca. 16 km inland from the north-eastern shore of the Beyşehir Lake. The monument is conventionally dated to the 14th-13th centuries BC on the basis of art historical and architectural considerations (e.g. Bittel 1976, 124-125; Börker-Klähn and Börker 1975; Kohlmeyer 1983, 103; Börker-Klähn 1993; Ehringhaus 2005, 53). The absence of hieroglyphic inscriptions, however, means that it cannot be attributed conclusively to either imperial or local forces. A Hittite imperial authorship is favoured by many scholars (Bittel 1976, 124-125;

Kohmeyer 1983, 41; Ehringhaus 2005, 53). Conversely, Mellaart (1962, 112-113) rightly challenged the description of Eflâtun Pınar as "Hittite" purely on stylistic grounds. He also pointed out that pottery from a nearby mound (ca. 0.8 ha), stretching from the Chalcolithic to the LBA, is not of NCA character, but shares closer links with the Beycesultan tradition (Mellaart 1962, 112). To link both mound and monument with the Hittite rival of Arzawa (Mellaart 1962, 117), however, is equally bad practice.

The complex consists of a rectangular pool (34 x 31 m), with relief representations on the north-west and south-east façades. The north-west façade is still preserved to a height of 6 m and shows depictions in three registers consisting of five standing mountain gods, two large seated figures with individual winged sun discs above their heads as well as smaller representations of heteromorphic creatures. An all-encompassing winged sun disc crowns the composition. The southern façade shows a seated female goddess and a less well-preserved male counterpart and may have originally resembled the structure on the northern side of the pool (Bachmann and Özenir 2004; Ehringhaus 2005, 53-57).

Interpretations of Eflâtun Pınar are many and diverse, concentrating mostly on the identity of the depicted figures, which range from a Hattian sun god and goddess (Bittel 1953), via a royal couple to the sun god and goddess of the Hittite state pantheon (Kohlmeyer 1983, 42). On the basis of the latter identification, Kohlmeyer (1983, 42-43), for instance, has drawn a series of parallels with the depictions of Yazılıkaya and late imperial textual sources. The use of "state divinities" in the representation at Eflâtun Pınar, he argued, point towards a central imperial authorship.

Similarly difficult to contextualise is the ca. 7.30 m high stele of Fasıllar (Figure 84 and Figure 85), which was found 20 km east of the Beyşehir Lake. Represented in two registers are a mountain god flanked by two lions and a striding male god in short skirt

and pointed-horned hat. The monument is unfinished and may have been abandoned before reaching its final destination (Ehringhaus 2005, 57). Neither precise date nor authorship can be conclusively determined, although a date in the LBA II is conventionally favoured (Bittel 1976, 234; Kohlmeyer 1983, 40; Ehringhaus 2005, 59). Mellaart (1962, 114-115, Fig.2) proposed a reconstruction of the Eflâtun Pınar complex with the Fasıllar stele on top of the main façade. Kohlmeyer (1983, 40), however, has argued against such a connection on the basis of structural considerations.

6.2.1.2.6. Karakuyu Reservoir

The second monument dedicated to the capture and storage of water with firm connections to a Hittite great king is located on the eastern edge of the central plateau below the Ziyarettepesi Pass (1900 m) on the route from Cappadocia to eastern Anatolia (Emre 1993, 1; Ehringhaus 2005, 49). The Karakuyu reservoir (Figure 86 and Figure 87) measures ca. 375 x 400 m (von der Osten 1933, fig. 115 in Emre 1993, Fig. 2). The drainage flow of the water through the northern dam wall was framed with stone slates, one of which contained an unfinished as well as one complete hieroglyphic inscription of the aedicula of Tudhaliya IV (Emre 1993, 4-5; Ehringhaus 2005, 49-50).

Relatively recent surface survey around Karakuyu did not detect LBA settlements in the vicinity of the dam. The nearest sites with some evidence of occupation in this period lie at a distance of 11 to 18 km from the reservoir (Emre 1993, 6).

6.2.1.2.7. Sirkeli 1

The only imperial rock monuments, as opposed to stone carvings on architectural elements, with associated built structures in a peripheral location are the reliefs at Sirkeli (Figure 88), and, with less certainty, those of Gâvur Kalesi.

The Sirkeli reliefs are located on the Ceyhan river near the northern foot of the Misis mountains in the Cilician plain. The close vicinity of the multi-period mound of Sirkeli Höyük (Ehringhaus 1997, 1999) would even suggest an urban context for the reliefs, although they are only visible from the river. Recent excavations have revealed walls of up to 2 m thickness directly on top of the rock containing the reliefs (Ehringhaus 1997; 1999; 2005, 99) and with ca. 7 ha, the mound is one of the largest LBA sites in a densely settled Cilician plain (Haider 1999).

The rock relief itself portrays a striding male figure in a long robe and round cape holding a shaft. The hieroglyphic inscription behind the figure identifies him as great-king Muwatalli, son of Mursili II. In 1994, a second relief, Sirkeli 2, was discovered 13 m downstream on the same rock outcrop (Ehringhaus 1995a, 66). A similar figure is recognisable only in outlines and with no identifiable inscription. Ehringhaus (2005, 100) recently proposed a deliberate removal of the depiction in antiquity. Through comparisons with the Hatip relief near Konya and wider historical considerations, Ehringhaus (2005, 100, 107) arrives at a hypothetical ascription of Sirkeli 2 to Kurunta, son of Muwatalli. Beyond the location of the hieroglyphic inscription behind rather than in front of the figure and their orientation to the right, it is, however, difficult to follow Ehringhaus' (2005, 100, 107) claims of strong connections between the Sirkeli and Hatip reliefs.

6.2.1.2.8. Gâvur Kalesi

The site of Gâvur Kalesi (Figure 89 and Figure 90), located around 70 km southwest of Ankara, consists of a 60 meters high rock outcrop and associated architectural elements of LBA and Phrygian date. Three larger-than-life figures are carved on its southern, 12 m high, rock face. These figures, two striding males in short skirts and pointed-horned hats, and one seated female, have tended to be identified as gods in the more recent discourse (Kohlmeyer 1983, 47-48; Ehringhaus 2005, 13-14; for a

different version Börker-Klähn 1982, 95-96). The complex as a whole is conventionally dated to the LBA II and ascribed a cultic function related to the royal death cult. Various authors have proposed the equation of Gâvur Kalesi with the "Stone Houses", $^{NA}{}_4$*hekur,* of Hittite texts (Naumann 1955, 408-409; Güterbock 1967, 81; Kohlmeyer 1983, 48; Kühne 2001) or as a general place of worship for deceased kings (Börker-Klähn 1982, 97).

A recent survey around the monument has revealed that the LBA occupation was much more dense and complex than originally observed (Lumsden 1995; 2002, 116-119). A contemporaneity of the reliefs, the cyclopean complex and a settlement as indicated by the scatter of "Hittite" pottery, so Lumsden (2002, 119), would support the identification of the site as a "Stone House" and the accompanying landed property known from the texts. From the perspective of landscape studies, Lumsden (2002, 120-121) points out that Gâvur Kalesi was located on the boundary between two landscapes and on an important thoroughfare and border zone between central and western Anatolia (also Börker-Klähn 1982, 257). The site may have fulfilled a combined military and religious function, "capturing" a dangerous landscape.

6.2.1.3. Imperial Rock Monuments

6.2.1.3.1. Fıraktın

The only rock relief in the narrower sense with demonstrable links to a Hittite great king is Fıraktın (Figure 91 and Figure 92). Together with four additional reliefs of officials and princes (see below), Fıraktın forms part of an apparent LBA strategy to mark and control a valley system that provides access to Cilicia and south-eastern Turkey.

The landscape context of Fıraktın is a fertile high-valley, which is flanked by the 3917 m high Erciyes Dağı in the north and the Aladağ (3756 m) in the south and which runs parallel to the Taurus range. The Zamantı Irmağı drains this valley and passes through

the narrow gorges of the Antitaurus before it flows into the Seyhan Nehri (Ehringhaus 2005, 59; Kohlmeyer 1983, 67). The rock relief of Fıraktın lies at a southward bend of the Zamantı Irmağı, 25 km downstream from the Taşçı reliefs at the confluence of this river with a tributary. It is carved into the 6 to 8 m high vertical rock wall on the eastern bank of the Enzel Dere (Ehringhaus 2005, 59-61).

The monument itself consists of two pictorial scenes measuring ca. 1 m in height and 3 m in length at a height of around 1.8 m that are followed by a ca. 50 cm high and 1.5 m long hieroglyphic panel (Kohlmeyer 1983, 69; Ehringhaus 2005, 61). The relief faces northwest towards the Erciyes Dağı and depicts two offering scenes, one with male and one with female protagonists, which are identified as Hattusili III, his wife Puduhepa and the female goddess Hepat/Arinna through Luwian hieroglyphic inscriptions. The inscription detailing the identity of the male god is mostly broken off and interpretations naturally diverge on his identification (Kohlmeyer 1983, 73). The inscription to the right of the female offering scene refers to Puduhepa and reads "Daughter of the Land of Kizzuwatna, beloved of the deity" (Ehringhaus 2005, 64).

Although the Fıraktın relief has no immediate urban or architectural context, two LBA settlements are located in its vicinity. The Höyük of Fıraktın (ca. 7 ha) is located ca. 2 km from the relief and trial excavations in the 1940s and 1950s are reported to have produced large-scale LBA architecture. Evidence for the importance of the communication route passing through the valley system is a Late Helladic IIIC stirrup jar (Özgüç 1948; Özgüç 1955). A smaller, multi-period, mound lies 400 m to the north-east of the relief (Kohlmeyer 1983, 68-69).

6.2.2. Representations of Officials

In contrast to the diversity of iconographic and inscriptive representations of Hittite great kings and their various settings, depictions and hieroglyphic representations of

other individuals are seemingly restricted to rock reliefs. Some of the reservoir monuments, which are conventionally ascribed to the Hittite central power, could conceivably also relate to local kings or princes. Monuments that can be securely associated with local agents are located in Regions A3/E, A2/G1, D and F.

6.2.2.1. Taşçı A

A relief depicting three persons, who either represent or are related to official roles (Figure 93 and Figure 94), is located 25 km upstream from Fıraktın (Kohlmeyer 1983, 74-78; Ehringhaus 2005, 65-68). The relief of Taşçı A is carved on a smoothed face of a rock-outcrop through which the Şamaz Dere flows just before it converges with the Zamantı Irmağı. The carvings are heavily weathered and seem to show the procession of two male and one female figure with a, still not entirely understood, hieroglyphic inscription behind and above. The female figure is identified as "Manaza/i, daughter of Lupaki, son (?) of the army-scribe" (Ehringhaus 2005, 68; also Kohlmeyer 1983, 77-78; Hawkins 2005, 292-293). The signs to the left have been read as "Zida, Body Guard" which may be brought in association with the inscription on the far left that translates "Servant of Hattusili, Great King, Hero" and which may refer to either Zida in particular or the entire depicted group (Hawkins cf. Ehringhaus 2005, 68). Most recently, Hawkins (2005, 292-293) proposed a reading of the inscription as "Manazi, daughter of Lupaki the Army-Scribe (son of ?) Zida the MEŠEDI-man, servant of Hattusili". A scribe of the name Lupaki is known from the Boğazköy-Hattusa archives (Herbordt 2005, 76-77) and a Zida, chief of the body-guards, was a brother of Suppiluliuma I (Hawkins 2005, 293). The hieroglyphs identifying the male figure to the right have been read as the personal name Hutarla/i by Kohlmeyer (1983, 77).

6.2.2.2. Taşçı B

A second monument, Taşçı B (Figure 95), lies 100 m upstream and represents pictorial and hieroglyphic carvings on an individual, freestanding rock immediately on/in the river. Depicted is the upper body of a male figure in greeting position, clad in a long

gown and round cap. Various scholars have identified differing numbers and types of hieroglyphic signs above and below the greeting arm (Kohlmeyer 1983, 79 Fig. 31) but no conclusive reading has been possible so far.

Pits and moulds in the rocks near the carvings as well as the depictions of Taşçı A and B themselves have been interpreted as part of a regularly enacted cult procession (Ehringhaus 2005, 70). No conclusive LBA settlements have been identified in the area (Kohlmeyer 1983, 74).

Several differences can be noted between the reliefs of Taşçı and other contemporary monuments. The first and most obvious divergence are the subjects of representation, which, certainly in the case of Taşçı A, are persons other than rulers or divinities. In addition, the technique of carving used for the two monuments is rudimentary and rather different to most royal inscriptions. Conversely, they share similarities with the carvings of Akpınar, Suratkaya and Malkaya (see below). Against a deliberately flattened background, the figures and inscription of Taşçı A are outlined through chiselled flutes of finger-width (Kohlmeyer 1983, 75; Ehringhaus 2005, 66). Taşçı B was traced through scoring.

The schematic character of the depictions and the arrangement of the hieroglyphic signs provide an impression of "provinciality". Rather than a necessity imposed by the properties of the limestone background (Kohlmeyer 1983, 75), this characteristic may be explained by the social standing of the depicted persons, if we assume that they also commissioned/made the carvings, and their probably more restricted access to specialist stonemasons' techniques and skills. In this way, both carvings are likely to present the work of localised power-holders along the lines of regional governors, who emulated imperial modes of representation in a smaller-scale dialogue. In the same region, two further rock monuments of princes mark this landscape out as a vital nodal

point of communication but also perhaps an important and contested border area during the LBA.

6.2.3. Representations of Princes

The largest number of LBA rock reliefs and carvings belong to individuals identified as princes or great-princes. In Hittite cuneiform texts as well as Luwian hieroglyphic inscriptions and glyptic, the title "prince" defines not only direct male descendants of Hittite rulers but was a term used for male offspring of the extended royal family. It could also be acquired through marriage into the same or may simply be a reference to high officials (Klengel 1999, 326-327, 331-345; Poetto 1992, 435; Herbordt 2005, 106). The Hittite crown relied on these princes, who populated the highest administrative echelons – but apparently not the military equivalents (Herbordt 2005, 126, Fig. 17) - at the capital and in peripheral territories for the running of their empire. At the same time, they presented a threat to the centralised power of the Hittite great king and various measures to control royal ascendance and to extract oaths of loyalty from these are known from textual sources (e.g. Schuler 1957; Klengel 1999, 326-345).

6.2.3.1. İmamkulu

The relief of İmamkulu (Figure 96 and Figure 97) lies 10 km east of Taşçı, where the valley of Develi reaches the mountains and an ascending path leads towards the Gezbel pass, an important route into Cilicia. The relief is carved on a free-standing rock, whose oval, flattened front measures approximately 3.25 x 2.30 m.

The relief depicts a male warrior figure with sword, spear and bow, identified as "Prince Ku(wa)lamuwa", marching behind a three-tier composition of the weather god in the process of mounting a bull-drawn cart, which stands on a procession of mountain gods and demons (?). Opposing them is a goddess on a stylised tree and a bird is flying between the two gods. The relief has been interpreted in various ways in the past

(Börker-Klähn 1977; Ehringhaus 2005, 73-75) but as Kohlmeyer (1983, 86) pointed out, the incorporation of the figure of the prince points towards a primarily representational function of the relief. In this manner, İmamkulu stands in direct relation to the relief of Hanyeri, which is located on the other side of the Gezbel pass, where the same prince is attested. His name also appears on the Akpınar relief in western Anatolia (see below).

The only textual reference to a Ku(wa)lanamuwa is a fragmented line in the Annals of Mursili II (Goetze 1933, 26-27), where a person of this name appears to have acted as a dignitary in south-east Anatolia during the politically instable period after the death of Suppiluliuma I (Goetze 1933, 26-27; Kohlmeyer 1983, 31-32). A sealed bullae of a Ku(wa)lanamuwa and likely contemporary of Tudhaliya IV, who carried the title of REGIO.DOMINUS rather than REX.FILIUS, was found in the Nişantepe archives (Herbordt 2005, 14 Tab. 4; Hawkins 2005, 261, Nr. 192-193).

6.2.3.2. Hanyeri

The relief of Hanyeri (Figure 98 and Figure 99) is cut approximately four meters above the modern road into a limestone rock face, 200 m below the summit of the Gezbel pass. It depicts a ca. 2 m high central male warrior figure, which is identified, as in the case of İmamkulu, as "Prince Ku(wa)lanamuwa" (Ehringhaus 2005, 76; Hawkins 2000, 39, Note 15; 2005, 260-261 Nr. 186-190; Kohlmeyer 1983, 87). Opposite, a smaller bull figure stands with his hind legs on what is conventionally referred to as an altar and on the shoulder of a mountain god with his front legs. The first line of the accompanying hieroglyphic inscription reads "King of the Mountain, Sarrumma" (Ehringhaus 2005, 78). To the right of the warrior figure a second, axial-symmetric inscription, mentions a "Prince Tarhuntabiyammi" (Ehringhaus 2005, 80; Hawkins 2000, 39, Note 15; Kohlmeyer 1983, 87).

With one possible exception at some distance to the relief, no LBA settlements have been reported in the vicinity of the two rock reliefs (Kohlmeyer 1983, 81, 86). The function of İmamkulu and Hanyeri was clearly the marking and guarding of the Gezbel pass. Both in technique of carving as well as iconographical detail, the two depictions share close connections with the monuments commissioned by Hittite great kings. The iconographic style of the male warrior at Hanyeri is also closely mirrored by that of Hamite, which guards the southern exit of the Ceyhan river from the Taurus mountains.

6.2.3.3. Hamite

The relief of Hamite (Figure 100), as İmamkulu and Hanyeri above, is located on an important communication route from Cappadocia into Cilicia and further, via the Amanus mountains into eastern Anatolia. A rugged lime-stone rock-face in a narrow passage of the Ceyhan river presents the canvas for the relief carving of a 1.75 m tall male warrior figure identified by a postpositional hieroglyphic inscription as "[...]tarhunta, Prince, Son of Tarhuntabiya, Prince" (Hawkins 2000, 39 Note 16; 2005, 273 Nr. 418-420; Ehringhaus 2005, 108). A connection between Tarhuntabiya, with the Tarhuntabiyammi of the Hanyeri inscription has been suggested (Hawkins 2000, 39 Note 16). A prince Tarhuntabiya is also known from the Ulmi-Tesub treaty, which falls into the reign of either Hattusili III or Tudhaliya IV (van den Hout 1995, 11-19).

If these identifications are correct, a temporal gap of at least one generation would have to be assumed between the carving of the main relief and inscription of Hanyeri and the addition of the name of Tarhuntabiyammi on its right. This in turn, may be interpreted as a strategy of the latter prince to appropriate an already existing relief for his own purposes. Casting a wider historical net, Kohlmeyer (1983, 94-95) refers to a series of texts dating to the very end of the Hittite Empire Period in which the desertion of Hittite regional officials and military officers is detailed. The relief of Hamite, so

Kohlmeyer (1983, 94-95), could be one materially tangible expression of the disintegration of the empire after the death of Tudhaliya IV.

In terms of its settlement context, Hamite, as Sirkeli further to the south, lies within an area more densely populated during the LBA than the high-valleys further to the north. The nearest LBA settlements lie within 5 to 10 km distance to the relief and include Minarlı (Tilwa Höyük) and Tartalı Höyüğü. According to the survey results of Seton-Williams (1954), the entire Cilician plain and in particular its eastern part (Yakar 2001) experienced an increase in site numbers during the LBA (see Chapter 5). This prosperous region shows strong cultural and administrative links to the central plateau during the LBA II and the relief of Muwatalli II clearly points towards Hittite imperial presence in the area. At the same time, Muwatalli's monument indicates the need to secure this area ideologically, while the region's dissident tendencies are made clear by the Hamite relief and others along the upper streams of the Seyhan and Ceyhan rivers.

The rock relief of Keben in the Göksu valley may also be mentioned at this point. Carved on a rock face high above the valley floor and along an ancient route leading onto the plateau, the relief depicts a woman with a cape and long dress. There is no accompanying inscription and the monument is variously dated to either the LBA or the IA (Ehringhaus 2005, 112-118).

The remainder of landscape markers with references to princes is purely inscriptive in character and, with the possible exception of the cuboid rock outcrop of Malkaya (Ehringhaus 2005, 83) on a high plateau west of Kirşehir (Region A1), focus on western Anatolia (Region D). Difficult to date is an inscribed stele of prince Sauskakurunti, which was found in secondary context in the village of Çay and is now in the Ayfon museum. It mentions a military victory of this prince and his dedication of

the monument to the storm god. Opinions diverge about its chronological range (Ehringhaus 2005, 48-49).

6.2.3.4. Suratkaya

The inscriptions at Suratkaya (Figure 101 and Figure 102) are located between the important passes of Anadolu and Yaylacıkır Beleni in the Latmos mountains of south-west Anatolia, a long distance from contemporary settlements. The location of the inscriptions, however, allows a wide view both to the south and north (Peschlow-Bindokat 2001, 364-365).

Altogether six groups of hieroglyphs were recently detected on the smooth vertical surface (ca. 3.70 x 12 m), which is protected by an overhanging rock. All six sign groups are shallow carvings and five are heavily weathered and, therefore, difficult to read (Peschlow-Bindokat 2001). Of these, a "Man of Mira", three princes and another named person (Kuwalaya) may be identified (Herbordt 2001). Sign group five is best preserved and presents the aedicula of "great prince" Kupaya (Herbordt 2001, 374-375). Herbordt (2001, 375-376) proposed a hypothetical identification of Kupaya with the prince and later king of Mira, Kupanta-Kuruntiya, who by adoption became a nephew of Mursili II. The use of the title "great prince" is not attested elsewhere. Peschlow-Bindokat (2001, 366) sees in this title a chronological indicator for the carving of the inscription prior to the introduction of kingship to the region by Mursili II or Muwatalli II (Heinhold-Krahmer 1977, 128-129).

Regarding the explicitly hypothetical nature of the equation Kupaya = Kupanta-Karuntiya (Herbordt 2001, 375), all further interpretations are built on difficult ground. The rudimentary nature of the inscription in comparison to those with obvious connections to the Hittite imperial dynasty, does not seem to justify the reading of the Suratkaya inscriptions as tangible political influence of the Hittite great king in western

Anatolia: "*Direkter politischer Einfluß des hethitischen Großkönigs wird hier greifbar.*" (Peschlow-Bindokat 2001, 366). Whether the "great prince" Kupaya had strong connections to the Hittite royal family or not, the Latmos inscriptions are clearly a local statement of power and territoriality. The inland direction of the carvings, ultimately towards central Anatolia, may or may not be an indication as to whom they addressed.

6.2.3.5. Akpınar

Also located in western Anatolia and to the north of Suratkaya, the rock monument of Akpınar (Sipylos) (Figure 103 and Figure 104) is cut into the northeast side of the Manisa Dağ 150 m above the valley ground. A rock-cut niche (4.60 x 7.50 m) frames a large figure modelled almost in the round. To the right of the figure are carved two hieroglyphic inscriptions, one in relief (Akpınar 1) and the other with shallow incisions (Akpınar 2). A large number of travellers and scholars beginning with Pausanias have described and interpreted the 4.30 m tall sculpture, which is extremely weathered. Identifications have ranged from mother goddess to a standing male figure (Kohlmeyer 1983, 28-29; Ehringhaus 2005, 85-87 for detailed discussions).

To the top right of the sculpture, which is outside the niche and therefore does not have to be chronologically related to it, lies the hieroglyphic inscription of Akpınar 1 that reads "Ku(wa)lanamuwa/Ku(wa)lamuwa, Prince" (Kohlmeyer 1983, 31-32). The shallow hieroglyphic marks of Akpınar 2 further to the right and below Akpınar 1 represent two names, one of which can be read as "Zuwanza, Herald". A person of the same name is attested in Hittite cuneiform sources (Kohlmeyer 1983, 32-33).

6.2.4. Representations of Vassal and Rival Kings

Rock reliefs, which can be attributed through their accompanying hieroglyphic inscriptions to kings of Hittite subject territories or rival political entities, are located in western Anatolia (Region D) and the Konya Plain (Area A3/E).

6.2.4.1. Karabel Reliefs

A series of figurative and inscriptive rock reliefs line the road from İzmir over the Karabel pass south into the Meander valley. The relief Karabel A (Figure 105) was carved into a slightly slanting, southward facing lime-stone cliff. Inside a niche (2.35 m x 1.95-1.56 m), a male warrior figure is depicted with pointed, horned hat and short skirt. In his left hand the figure is holding a spear and a bow, which is slung over his right shoulder. A sword hangs from his waist. To the left of the spear is a three line hieroglyphic inscription, reading

> Tarkasnawa, King of < the land> Mira, [son] of Alantalli, king of the Land Mira, grandson of [...], king of the land Mira.
> (Hawkins 1998, 4, 8)

King Tarkasnawa of Mira was a likely contemporary of Tudhaliya IV and is attested from impressions of two different seals at Boğazköy-Hattusa as well as a biconvex silver seal (Hawkins 1998, 4). The conclusive reading of Karabel A had important implications for the reconstruction of the political geography of LBA western Anatolia, whereby the Karabel pass has become firmly associated with the northern border of the kingdom of Mira with the Seha River Land (Hawkins 1998, Fig. 11), both of which were Hittite vassal states after the conquests of Mursili II.

Karabel reliefs B and C1-2, which are now destroyed, were located at some distance from Karabel A on freestanding rocks close to the Karabel river. From Kohlmeyer's recordings (1983, 21 Fig. 5) Karabel B appears to have shown a similar figure as relief A, although only the lower third, parts of the spear and traces of hieroglyphs, one of which was the sign for king, were preserved. Relief Karabel C1 has been read in various ways, while relief C2 may be that of the father of Tarkasnawa (Hawkins 1998, 9). Exploration in the surroundings has not identified any LBA settlement locations (Kohlmeyer 1983, 13).

6.2.4.2. Hatip

The second rock monument, whose author carried the title of great-king, was found at Hatip, near Konya in 1993 (Dinçol 1996) (Figure 106). Here the relief of a male warrior in short skirt and with pointed-horned hat, spear, bow and sword is identified by a postpositioned hieroglyphic inscription as "Kurunta, Great King, [Hero], son of Muwatalli, Great King, Hero" (Dinçol 1996, 28). Ehringhaus (2005, 102) proposed a deliberate removal of the upper part of the sign for "great king" (MAGNUS REX) on the Hatip inscription in antiquity, leaving only the hieroglyph king in the title. It is on this basis that Ehringhaus (2005, 104) links Hatip with the eradicated figure at Sirkeli 2.

The theme of the Hatip relief resembles closely that of Karabel A, with the exception of the position of the inscription and the physique of the two warriors. Besides differences in headgear and orientation, both Karabel and Hatip also compare well with the reliefs of princes at Hanyeri and Hamite.

6.2.5. NCA-Style Reliefs in South-East Anatolia and Northern Syria

Stone stelae carved in NCA-style were also found at Tell Atchana-Alalakh (Bittel, Abb. 231) and Çağdın in eastern Turkey (Bittel 1976, Abb. 207).

6.2.6. Imperial and Local Landscape Monuments – Preliminary Conclusions

The above discussion of stone and rock carvings and other, primarily landscape oriented monuments, which can be associated with either the central imperial dynasty or with local forces, has illustrated the diversity of authorship of hegemonic landscape markers in LBA Anatolia. From this it seems that Hittite great kings account for a rather small number of such monuments outside the capital and core region, in particular in the genre of rock carvings. The majority of these can be attributed to either local kings (Karabel, Hatip), princes (İmamkulu, Hanyeri, Hamite, Akpınar, Suratkaya and possibly Malkaya) or persons of official rank (Taşçı A). Origin or authorship of purely figurative

monuments are difficult to identify but scholarly opinion has tended to favour a central imperial origin for, for instance, Eflâtun Pınar and Gâvur Kalesi.

The individuals portrayed or named on rock monuments have been associated, to different degrees of persuasiveness, with persons of the same name who are known either from LBA textual or glyptic sources. The familial or contractual ties of these persons with the imperial dynasty together with stylistic links between imperial and local iconography have produced interpretations that have tended to brush over an evident diversity in strategies of power. Local or regional characteristics as well as "provincial" elements in addition to the title and rank of depicted individuals point towards a vibrant ideological and political dialogue between the central imperial dynasty and local power-bases, whether they were originally awarded by the central administration or not.

Overall, close iconographic connections link the reliefs of Karabel A, Hatip, Hanyeri and Hamite, all of which depict a male warrior figure in short skirt. Differences exist between individual depictions from physical characteristics to orientation and the location of hieroglyphic inscriptions. Ehringhaus (2005, 98-99) identified the practice of postpositioning inscriptions on the reliefs of Sirkeli 1, Hatip and Hamite as a southern idiosyncrasy. He also proposed that figures with orientations to the (viewer's) right served as border monuments, as the depicted persons are thought to look towards their own country (Ehringhaus 2005, 106). Included in this observation were the reliefs of Karabel A, Hatip, Sirkeli 2 as well as that of Keben, whose dating is not agreed upon (Ehringhaus 2005, 106). In addition, the male warrior on İmamkulu, as well as the figures of Taşçı A and B, also look to the right, and in the case of the latter are less likely to present border monuments in a geopolitical sense.

More pronounced differences in terms of the technique of carving exist between imperial reliefs and the, by comparison, rudimentary renderings of the figures and inscriptions of Taşçı A and B. Purely inscriptive carvings, also of a local or "provincial" style and technique, are located in the western part of Anatolia at Suratkaya and Akpınar as well as at the central Anatolian location of Malkaya. At all of these sites multiple inscriptions were found, which indicate their importance in a continued discourse of marking places and projecting hegemonic claims. East of the plateau, the relief of Hanyeri features inscriptions of two different princes, which presumably were carved at different points in time.

The chronological distribution of these monuments is an important question, which cannot be resolved at present in an entirely satisfactory manner. The dating of monuments whose protagonists are not readily identifiable relies on comparisons of personal names with Hittite textual sources and/or chronologically significant palaeographic or iconographic criteria (Kohlmeyer 1983, 12). Induced by the apparent proliferation of imperial monuments within and outside the core region in the final century of the LBA, landscape monuments of other individuals have tended to be attributed to the same chronological phase. The majority of commentators seemingly favour a broader Empire Period (14^{th}-13^{th} centuries BC) time-frame (Kohlmeyer 1983, 103; Börker-Klähn 1982, 88;) or a narrower 13^{th} century BC distribution centred on the reigns of Hattusili III and Tudhaliya IV (Bittel 1976; Ehringhaus 2005, 120).

Taking into account the, at times tentative, textual-historical links between the individuals mentioned in peripheral hieroglyphic inscriptions, an interesting pattern emerges (Table 35). If indeed the identification of prince Ku(wa)lanamuwa of the Akpınar 1, İmamkulu and Hanyeri A inscriptions with a high-official of the transitional period between Suppiluliuma I and Mursili II (Annals of Mursili II - Goetze 1933, 26-27) is permissible, LBA landscape monuments, rather than primarily a sign of central

imperial control, seemingly commenced as a strategy of provincial power. This may be supported by the relief of Kupaya at Suratkaya 5, if he is the Kupanta-Kuruntiya of the textual sources and a contemporary of Mursili II. On the one hand, a Ku(wa)lanamuwa etched his name in disparate locations across Anatolia in what is clearly an attempt to establish his own, rather than his king's, power. On the other, the inscription of Suratkaya is the making of a local ruler, who perhaps in the light of the restructuring of political circumstances in western Anatolia carved out a suitable territory for himself.

Only with Muwatalli II at Sirkeli do we find the first evidence for the direct engagement of Hittite great kings in the practice of claiming peripheral territory through the marking of borders and transitional locations. It took another two generations until Tudhaliya IV, his rival Kurunta and another powerful western vassal adopted rock reliefs as a true sport of (great) kings. The textual sources support this picture of increasing central weakness and the consequent proliferation of decentralising forces during the last few generations of Hittite great kings (e.g. Bryce 1998, 326-360).

The geographical distribution of LBA landscape monuments is striking in its own right. Works of Hittite great kings outside the capital and its immediate surrounding are located on the western and eastern edges of the central plateau either directly on important communication routes or in locations generally associated with passages to other parts of Anatolia. With the exception of the Muwatalli depiction at Sirkeli in what was the heartland of Kizzuwatna, Hattusili III and Puduhepa's relief at Fıraktın and Tudhaliya IV's inscription at Karakuyu seemingly guard the south-eastern fringes of the core area. Yalburt and possibly also Eflâtun Pınar may have fulfilled a similar function along the natural, cultural and likely also political border to the west.

A temporal component, indicative of changing interests and concerns in the projection of imperial power may also be tentatively proposed. It seems, thus, that earlier

generations of great kings concentrated ideological strategies, at least in the form of landscape monuments, in the south-east and along routes that allowed Hittite access to the natural and mercantile resources of south-east Anatolian and northern Syria. In the reign of Tudhaliya IV, although the Karakuyu inscription attests his concern also with this eastern area, identifiable imperial stone carvings, for the first time, appear on the south-western edges of the central plateau.

Equally tentatively emerging from settlement data is a similar temporal and spatial pattern whereby increasing territorial control in the southern core region (Region A1) and the Upper Land (Region A2) is visible somewhat earlier than comparable developments in the southern Lower Land (Region A3) (Chapter 5). The chronological control over survey data is much coarser than that of the monuments discussed in this chapter, yet a connection between the two phenomena seems not an unreasonable proposition. In this light, we might return to the question of the function of Hittite state monuments of this sort.

Clearly, all of the landscape monuments in question conveyed multiple meanings and served a multitude of functions besides the more general projection of hegemony (e.g. Wilson and David 2002, 5). However, from a macro scale perspective, rock reliefs and constructions in direct association with Hittite rulership were concerned with the framing or guarding of an interior rather than the subjugation of an exterior (see Seeher 2005, 42 for a similar opinion on Hittite relations to western Anatolia). The interior perhaps corresponds with the area seen in the survey record to undergo major re-organisation during the LBA, in what can be interpreted as the spatial implementation of territorial control (Chapter 5). The concentration of imperial monuments in the last phase of the LBA contributes to the picture of these monuments as a defensive rather than offensive measure in the light of the textual sources as well as the distribution of landscape monuments commissioned by ambitious princes and the kings of powerful

vassal and appendage kingdoms. Future discoveries of additional rock monuments are probable in the light of recent findings (Hatip, Sirkeli 2, Suratkaya) and they may require the revision of these hypotheses. However, a less centrally driven interpretation of inter-polity relations as conducted through the media of landscape monuments appears more at ease with the immediate data and with other aspects of LBA material culture patterns that have been outlined so far. In the following chapter, I will summarise the results of these investigations and draw some conclusions about the nature and diversity of Hittite-local modes of interaction from both a material and textual perspective.

CHAPTER 7: NETWORKS OF INTERACTION IN LATE BRONZE AGE ANATOLIA

> The evolutionary significance of archaic empires lies in the changes that resulted from the integration of diverse societies into polities, unified along a variety of dimensions.
>
> (D'Altroy 1992, 221)

In this thesis I have examined from an archaeological perspective a range of regional behaviours and their diachronic transformations that inform on a series of forms of interaction between the Hittite political and cultural heartland and its surrounding regions. The overall aim of this analysis has been to gain an alternative, regional and bottom-up understanding of Hittite imperialism, its implications for local societies as well as the roles of decentralised forces in the shaping of a discourse of empire in Late Bronze Age Anatolia and northern Syria. The analyses in Chapters 4, 5 and 6 have provided us with a number of archaeological patterns indicative of complex and regionally diverse imperial-local relationships that range from contact to various forms of cultural and political interaction and, in some cases, include archaeologically tangible forms of control. The findings of this thesis indicate that in the majority of cases, imperial-local relationships resemble a complex web of cultural and political interaction networks and were, thus, less clear-cut and in favour of all encompassing central control than inferences made from Hittite documents would have us believe. On a general level, these regional relationships resemble more closely the incessant back and forth of military campaigns detailed in royal deeds and annals (Chapter 3) but whose spheres of expression reach beyond that of armed exchanges.

As I have outlined in Chapters 1 and 2, an archaeology of imperialism, away from the historical particularism that characterises much of past work on LBA Anatolia, faces a series of methodological difficulties and requires a theoretical premise of broad behavioural analogy with similar imperial entities as well as multiple strands of archaeological evidence from a wide geographical area. The archaeology of

subservience or vassaldom has as yet to gain currency and to attract scholarly attention in the same way. One of the interpretive frameworks for the reconstruction of the intensity of control in different regions is the hegemonic/territorial model (Chapter 2). Working with archaeological data, this framework is most successful in the identification of direct, territorial control and integration that may involve large numbers of imperial personnel, distinct material culture elements, as well as the reorganisation of regional political and economic structures. It aids rather less effectively in the identification of indirect or hegemonic imperialism for which tangible material evidence tends to be scant or vary along a continuum of local responses that are less predictable and strictly contingent on imperial causes. From the results obtained in this thesis, a number of regional relationships seemingly fall between the profound transformations of territorial integration and those of strictly political control in what may be termed "intensive hegemony". A modified core/periphery perspective has provided a broader theoretical framework for the conceptualisation of inter-regional relationships in the form of overlying networks of interaction that involve degrees of inequality between political and economic cores and their peripheries. In more recent perspectives, peripheral societies are not passive recipients, but their active choices, within the parameters available to them, define the imperial-local relationship alongside the strategies of appeasement, control and exploitation pursued by imperial centres. At the same time, not all channels of interaction are wilfully manipulated by the central state apparatus and a theoretical view beyond individual imperial boundaries is indispensable for the appreciation of large-scale trends such as settlement transformations as well as for the issue of cultural adoption and rejection in the context of multiple competing political and cultural spheres. The following discussion, besides presenting a summary of the results of the different analyses in Chapters 4 to 6, will assess the suitability of these interpretive models for the Hittite case.

In Chapter 3 I have argued for the necessity to disentangle the material culture traditions of the central Anatolian plateau from the ethnonym and linguistic term "Hittite" as well as the political entity. Instead, I have used "north-central Anatolian" (NCA) as a term for a package of specific material cultural traits throughout this thesis. This nomenclature allows the fresh examination of archaeological phenomena independently of the conjectures of Hittite political and cultural supremacy inspired often by the mere existence of Hittite textual accounts.

7.1. Four Levels of Inter-Regional Interaction

In Chapters 4, 5 and 6, eight regional ceramic assemblages, settlement systems and their transformations across Anatolia and northern Syria as well as the distribution of NCA administrative technology, identifiable either as the tools of Hittite officials or as local cultural adoption, and the use of landscape monuments for the projection and negotiation of territorial hegemony have been selected for the analysis of inter-regional relationships in the specific historical context of the Hittite empire. Reasons for this choice, besides availability in the published record, were the different levels and types of interaction these data sets either formed part of as material objects, present ideological or cultural symbols of, or are likely to have undergone transformation as part or consequence of strategies of imperialism.

7.1.1. Cultural Adoption and Adaptation – The Ceramic Evidence

Regional pottery traditions and the proliferation of NCA ceramic traits in surrounding regions present the first level of archaeological analysis. The plain and seemingly utilitarian character of much LBA NCA pottery made this material culture category uniquely suited for the assessment of inter-regional interaction at a localised social and cultural scale. The homogenisation of pottery assemblages in large parts of LBA Anatolia is also an issue of current debate in Anatolian archaeology, with scholarly opinion tending towards an imperial-centric explanation.

The differences observed in the ceramic assemblages of Porsuk, Gordion, Beycesultan, Aphrodisias, Tarsus, Korucutepe, Norşuntepe and Tille Höyük in comparison to NCA repertoires include chronological, formal and technological variables and each of the sites investigated seems to have a rather different proportional make up of local and NCA vessel types. Following from these observations, NCA ceramic traits are here treated as indicators for cultural contact, the intensity of inter-regional interaction as well as the degree of local interest in imperial culture. The results of this analysis also suggest that an identification of *all* NCA ceramic traits in surrounding regions as part of a *specific* political and/or economic strategy of the Hittite empire, as envisaged by some scholars (Korbel 1985; Gates 2001; Postgate 2005), cannot be upheld. A centralised or state initiative cannot be excluded for the presence of NCA ceramic traits at Korucutepe and Tille Höyük, but several characteristics in these assemblages point towards processes involving one or more elements of local choice, cultural adoption and adaptation. The social context or level where these choices were made, how deep they pervaded regional social systems and how strongly these decisions were influenced by the degrees of political and economic interaction with the Hittite imperial authority, in the form of resident officials or crafts-people, cannot be answered with the available data and are questions for future field research.

7.1.2. Gains and Losses of Control – Settlement Dynamics in LBA Anatolia

A comparative and diachronic perspective has been adopted in Chapter 5 for the investigation of regional settlement systems and their transformations during the LBA from across Anatolia and parts of northern Syria (Map 50). Continuity and discontinuity in regional settlement patterns and their hierarchical arrangements have been treated as indications for stability and change in local political and economic organisations. The spectrum of possible transformations is broad and survey data in many regions often unreliable; but while the sources of spatial continuity or change at the lower end

of regional hierarchies are less easily determined, developments at the top of settlement networks, particularly when they resemble well documented trends in the imperial heartland (Chapter 3), have been used as indicators of the degree of control the Hittite empire may have exerted over an area. Beyond a general pattern of decrease in settlement numbers apparent also across the wider Western Asian region (e.g. Wilkinson 2000b; 2003), three major regional trends have been identified in this study.

Processes of territorial integration of key central regions can be observed through the abandonment or diminishing importance of several large MBA sites and their replacement by newly established regional and sub-regional centres in the size range of excavated settlements in the imperial core region. This process, which I have tentatively identified as the spatial expression of the imposition of direct Hittite control and the breaking up of MBA territorial arrangements, was a gradual one whose focus apparently shifted from the north-eastern to the southern plateau in the LBA II. The spatial signatures of types of control varying between deep reaching integrative processes and purely political command are less clearly distinguishable from decentralisation or lack of control. In addition, historical knowledge of Hittite hegemony over a particular region necessarily preconditions the analyst to identify whatever is observed as the spatial expression of the form of control detailed by the textual accounts. At least two regions (Regions F and G) appear to have undergone settlement developments that may be argued to be indicative of incorporation into a larger socio-political structure but with the retention of previous political arrangements. Common developments in these regions include the otherwise unusual increase of settlement numbers as well as the retention and increase of positions of regional supremacy by sites already prominent during the preceding phase. In many cases, excavations at the larger sites revealed a lack of defensive and other architectural traits identifiable with centralised government. Other features too point towards close inter-

regional interaction of Regions F and G with the NCA plateau, and a level of control somewhere between the profound restructuring observed in the central regions and archetypical hegemonic rule may be postulated on the basis of the archaeological evidence.

A further process observed from LBA settlement developments is the formation of frontier regions to the north and east of Region A and the apparent loss of control over areas located beyond these borders, which experienced a cessation of permanent settlement.

7.1.3. Imperial Administration and Local Practices

A more direct indicator of central control or close political interaction is the presence of NCA administrative technology in surrounding regions in the form of seals, bullae and cuneiform texts. Administrative implements and evidence for their use at settlements surrounding the central plateau can be representative of a number of events and practices, from the exchange of correspondence to the management or supervision of a regional polity by imperial officials. The adoption and emulation of imperial glyptic and administrative practices by regional elites present complementary or alternative local behaviours in the negotiation of local social and political power.

A clear chronological and geographical pattern has emerged from the analysis in Chapter 6 that indicates a concentration of Hittite imperial administrative effort in the south and south-east of Anatolia as well as in northern Syria. The degree of central administrative interference and local practices of adoption and hybridisation, however, differ distinctly between and within these regions. The evidence from Region F and Region G2 suggests the presence of administrative personnel, correspondence with the central region as well as the adoption of NCA glyptic and practices by local elites.

Polities in Region J appear to have had different relationships with the Hittite empire in terms of the origins of imperial decision-making and the degree of local receptivity for cultural influences. The archives of Meskene-Emar point towards a close administrative connection with the Hittite viceregal seat at Carchemish and show clear signs of cultural adoption that is also found to a lesser degree at other northern Syrian sites. Conversely, the coastal kingdom of Ugarit, although in close and direct diplomatic contact with the Hittite chancellery at Boğazköy-Hattusa displayed little interest in Anatolian cultural traditions.

Western Anatolia has yielded only a very limited number of NCA seals and seal impressions, which seems to indicate a lack of direct imperial strategies of control and, perhaps, also limited interaction along formalised administrative and/or diplomatic channels.

7.1.4. A Monumental Discourse – Imperial and Local Strategies of Territorial Appropriation

The second analysis presented in Chapter 6 has explored the distribution of LBA landscape monuments. The spatial and chronological distribution of rock reliefs and stone carvings and the diversity of their authorship has provided insights into the ideological discourse, rather than an imperial monologue, between central and decentralising agents over the appropriation of territories and their boundaries. The negotiation of imperial and regional power was led through a common iconographic understanding as well as, or in addition to, the use of Luwian hieroglyphic inscriptions. At this ideological level, Hittite great kings were most concerned with the demarcation of an "inside realm" via its boundaries and access routes. Similarly to other aspects of inter-regional interaction, central strategies focused on the southern and eastern plateau in the earlier part of the imperial phase. In the later part, under great king Tudhaliya IV, this focus shifted towards the western limits of the central plateau. Landscape monuments in western Anatolia, however, are of local authorship. In

contrast to other aspects of interaction investigated in this thesis, west Anatolia's elites actively participated in the negotiation of territorial hegemony through an NCA representational canon. The coexistence of local and imperial monuments in close proximity indicates the significance, both ideologically and power-politically, of a particular region or access route at the same time as it highlights its unsettled nature and ongoing negotiation.

7.2. Regional Perspectives

Overlaying these four patterns of archaeological evidence, a picture of diverse and distinct regional relationships emerges that in some, very general, respects corroborates the textual accounts but also challenges the impression of centralised imperial supremacy (Map 51 and Map 52). It provides a network of insights into a much more complex and nuanced political, cultural and ideological dialogue between a political and militarily central region and its surrounding and occasionally subordinate societies.

7.2.1. The Development of Territorial Control – Region A

Region A has been defined as the central Anatolian plateau and comprises the political and cultural heartland of the Hittite empire inside the bend of the Kızılırmak (Region A 1) and its earliest appendices, the Upper (Region A2) and Lower Lands (Region A3). The imperial capital and a series of excavated contemporary sites are located in the northern part of Region A (1 and 2), whose material culture as well as textual evidence attest to their function within the Hittite political entity and its cultural sphere.

The southern plateau is less well documented archaeologically. The only exception to this is the excavated site of Porsuk, whose published LBA pottery assemblage displays close connections with that of the Hittite capital at Boğazköy-Hattusa and appears to have formed part of a wider NCA cultural zone. Porsuk's strategic location at the

northern entrance to the Cilician Gates and near mineral resources as well as its fortification make Hittite control over the site a strong possibility. A Middle Hittite treaty with Sunassura of Kizzuwatna includes a detailed description of fortified border towns around the Cilician Gates (Goetze, 1940; Jasink 1993, 254). The prevalent pottery types in the published assemblage of Porsuk point towards an early or middle range in the LBA sequence. This could mean that the site was destroyed prior to the destruction or abandonment of the capital city. Alternatively, its inhabitants may have discontinued to follow ceramic trends in the imperial capital, perhaps indicating a degradation in the degree of control or frequency of interaction in the last phase of the LBA.

From the recent results of the Konya Plain survey, it would seem that the western part of Region A3 experienced an increase in the number of LBA settlements, whose ceramic traits are closely connected to the NCA tradition, as well as an east and southward shift in settlement location. Most notably, this settlement discontinuity affected major MBA sites such as Karahöyük-Konya, which were replaced by mostly newly founded centres in the later part of the LBA. A similar development seems to have taken place in the region around the Tuz Gölü and in the southern part of Region A1. Here too we find a slight increase in settlements with material from the later part of the LBA, including new regional and sub-regional centres.

The establishment of new LBA regional centres at previously insignificant or unoccupied locations is archaeologically best documented by excavated sites such as Ortaköy-Sapinuwa, Maşat-Tapikka and Kuşaklı-Sarissa located in the eastern extremity of the imperial core. In Region A2, this development took place in the Old and Middle Hittite phases. In view of the indubitable role of the above sites in the administration and defence of a centrally controlled territory and the striking match of their dimensions with newly established LBA centres detected by surveys across the plateau, I have suggested in Chapter 5 that these transformations represent the spatial

signature of the development of direct, territorial control. This process involved the imposition of a network of regional and sub-regional centres of similar size ranges in the place of, on average, larger MBA regional power bases that dominated independent polities during the period of the Old Assyrian trade colonies. Regionally internal decentralisation and relative standardisation of administrative units thus were elements of Hittite strategies of direct control. With the decrease of site sizes in surrounding regions, the capital city at Boğazköy-Hattusa grew accordingly, with more than three quarters of its enclosed space apparently dedicated to the government and representation of the imperial venture.

In addition to the evident limits of LBA settlement in northern and north-eastern Anatolia, the spatial extent of the above processes was fringed by a string of imperial landscape monuments. Similar to the north(east)-south drift in the transformation of settlement systems observed on the central plateau, there too appears to be a chronological factor in the geographical distribution of rock reliefs and stone carvings from the eastern limits of the plateau to a more western and south-western orientation. Monuments depicting personages other than Hittite great kings but which emulate imperial iconographic conventions and the use of Luwian hieroglyphic inscriptions cluster along the river valleys providing access from the eastern and south-eastern plateau to Cilicia, the Euphrates valley and, ultimately, to northern Syria.

Access routes to and from the plateau, thus, seemingly presented ideologically, and likely also militarily, contested zones, whose control both imperial great kings and local princes sought to perpetuate through their symbolic presence. The monuments also delimit an "inside realm" of effective Hittite control, whose increasing pervasiveness was in the process of spatial and cultural manifestation up until the final part of the LBA when the southern plateau too became a politically and ideologically contested zone.

Beyond the extended core area of the central plateau, regional developments are diverse and vary along all four archaeological parameters investigated in this thesis.

7.2.2. Beyond Effective Control

7.2.2.1. Region B

The linear distribution of strategically located and often fortified settlements along major river courses in Region B and the scarcity of recognisable LBA materials to the north and east of these indicated the existence of a series of frontier zones. The absence of permanent and recognisable LBA habitation beyond the relatively densely settled border zones may be brought in connection with the textual accounts of tribal societies, whose unwillingness to surrender, outright aggression and ease of collective movement placed them beyond Hittite effective control.

7.2.2.2. Region I

Societies in Region I participated predominantly in the cultural traditions and political systems of north-Mesopotamia during the 2nd millennium BC. In detail, however, the reconstruction of LBA settlement trends is hindered by the difficulty of identifying local pottery and the establishment of a finer relative chronology. From the still rather scanty information from this wide region, however, no inter-regional interaction with the NCA plateau can be readily identified in the archaeological record.

7.2.3. Fading Direct Control and Cultural Interaction – Region C

The area identified as Region C is located in a transitional landscape between the central plateau and the western plains. The LBA II ceramic evidence of Gordion shows a gradual increase in similarities with the NCA tradition that encompass a broad variety of functional categories and formal subtypes as well as aspects of technological style. "Hittite" pottery has also been reported from Şarhöyük-Dorylaion further to the west in Eskişehir province (Darga and Starke 2003). The LBA pottery tradition of Region C2 differs from that of the NCA plateau, which Mellaart (1962) characterised as closer to

the Beycesultan tradition. Both Gordion and Şarhöyük-Dorylaion have yielded evidence for NCA administrative technology and practices, with the former site showing a variety of parallels to the NCA tradition. LBA landscape monuments skirt the western limits of the plateau to the east of Gordion.

On a more general level of regional development, Region C seemingly experienced a demographic reduction during the LBA, the southern part being more dramatically affected. If we follow the general impression of Charles Burney (1956) and others, settlement concentrated on relatively large LBA mounds in Region C. Possible interpretations of such developments include an unstable political and/or economic situation. They may also indicate the existence of a new centralising force, which could be a reaction against empire or indeed induced by the strengthening of local leadership by such an external force. Transformations in local settlement systems in Region C, as far as they can be reconstructed, however, differ from those in Region A as the former area apparently did not take part in the processes of spatial restructuring indicative of the imposition of direct Hittite control. In summary, we gain the impression of relatively low-key direct imperial involvement in the government of Region C1. Region C2 has so far yielded neither traces of intensive cultural interaction nor have any archaeologically contextualised finds of NCA administrative technology been reported.

Hittite textual sources paint a picture of relatively shallow and, at times unstable, Hittite control over what appear to have been mostly small-scale societies represented by groups of elders. On a very general level, this seems to matches the archaeological findings. Despite occasional conflict, many of these polities participated at the battle of Qadesh on the Hittite side, with imperial control evidently sufficient to extract tribute in the form of military support.

7.2.4. A Veneer of Hegemony? – Region D

Inter-regional interaction between different parts of Region D and the NCA plateau, from an archaeological perspective, appears to have been very restricted (also Seeher 2005, 40). The most clearly identifiable material aspects of contact and interaction with the Hittite empire are the local use of landscape monuments in much the same way as by Hittite great kings. Two carvings possibly pre-dating imperial examples, suggest multidirectional processes of cultural interaction rather than solely a central Anatolian influence in the development of common conventions of ideological display. The only instance of NCA administrative technology in Region D is a single biconvex seal from a fill context at Troy VIIb (Hawkins and Easton 1996), while the inscribed stamp from Metropolis, may represent a case of a local imitation of the Luwian hieroglyphic script (Schachner and Meriç 2000).

During the LBA the area here defined as Region D was divided into a series of cultural or pottery zones, which French and Mellaart (French 1967, 65, 68; 1969, 76) have suggested may represent the extent of political entities. Vastly more field research, however, is needed to even approach such a question. What is clear is the independent character of west Anatolian ceramic traditions from that of the NCA plateau. Only in the eastern most extensions of the western plains do we find indications of NCA ceramic influence in the last phase of the LBA and EIA.

Due to the lack of excavated sites in many areas of Region D, the chronological frameworks of past survey projects are for the most part too coarse to allow the reconstruction of a diachronic perspective on LBA settlement systems (similarly Seeher 2005, 40) that may help answer questions of political and economic change or continuity in this period. Surveys in north-west Anatolia have noted a decline in the number of 2nd millennium BC sites, while those identified were apparently larger than their EBA predecessors. A similar trend has been noted in the region round

Beycesultan. A recent survey conducted in the Troad found there to be an increase in sites with Troy VI and VIIa materials in comparison to late EBA find-spots (Rüstem and Bieg 2003, 166-167).

Extensively excavated regional centres such as Troy and Beycesultan point towards a strong degree of settlement continuity from the MBA to the LBA, although the two sites underwent rather different developments. While the LBA phase of Troy VI presents the apex of the city's existences, LBA Beycesultan is seemingly less imposing than in the preceding phase. Evidence for a discrete, high-status architectural complex and other indications of centrally controlled and organised works such as fortification systems and administrative technology are mostly absent and the site's status declines further in the final LBA-EIA levels. This potentially suggests a less centralised political organisation than the NCA model, while a downscaling of the characteristics of a regional centre are not entirely incompatible to trends observed in Region A. As with all other archaeological indications of inter-regional interaction found to date in western Anatolia, this development does not require, nor does it seem likely to have involved, hands-on Hittite control.

The standardised mode of Hittite historiographic accounts paints a picture of repeated Hittite campaigns in Region D, following aggressions by the Arzawa coalition. After the defeat of Arzawa in the early imperial phase, Mursili II, in an attempt to divide and rule, is reported to have instituted vassal rulers in Arzawa's constituent territories. Following Mursili's victory, Hittite textual sources are rather less concerned with Region D and present mostly retrospective mentions of Hittite victories and local intrigues, until a possible reference to a campaign by Tudhaliya IV against the Seha River Land (re-dated text Klengel 1999, 27). In the Yalburt inscription, Tudhaliya IV also claims to have defeated the Lukka Lands in south-west Anatolia.

In Chapter 2, I have taken the view that even hegemonic control requires practices of interaction that include the use of material objects and whose consequences and by-products show material manifestations. The extremely restricted nature of evidence of this kind in LBA west Anatolia seemingly challenges Hittite textual claims of effective control. Interaction may have taken place through the use of wooden rather than clay tablets and exchange of raw materials is also an option, but archaeological interpretations cannot rest on such conjectures. Even in comparison with Ugarit, which presents the "ideal" example of a hegemonically controlled territory with little cultural interest in the central Anatolian plateau, the current evidence from west Anatolia seems too scant for long-term effective control.

7.2.5. "Intensive Hegemony"

7.2.5.1. Region E

In contrast to Region D and C2, archaeological evidence for inter-regional interaction is well documented between the NCA plateau and the southern coastal regions. While the pottery from Level III at Kilise Tepe shows a number of affinities with the NCA tradition, a cultural break during the last part of the LBA (early Level II), albeit against a background of ceramic continuity, is evident in the architectural layout of the site and through the addition of new, and frequently painted pottery. Evidence of NCA administrative technology and staff at the site comes from the so-called Stele Building of Level II, where four biconvex seals were found. The results of surveys in Region E provide only limited information on the regional LBA developments; and from the ceramic descriptions of French (1965) I have deduced a possible increase in the number of LBA sites from the MBA.

Hittite textual sources first mention the political entity of Tarhuntassa in the imperial phase, as the city and country where Muwatalli II moved the imperial capital to for a short period of time. Muwatalli's descendants held political sway over Tarhuntassa

after the usurpation of the imperial throne by Hattusili III and the transfer of the capital back to Boğazköy-Hattusa. In various treaties and decrees the semi-autonomous status of Tarhuntassa is declared while at the same time the Hittite state cult was practiced in its settlements. Evidence from Tudhaliya IV onwards, however, suggests a strained relationship with a powerful rival and Suppiluliuma II is reported to have conquered the city of Tarhuntassa. The rock relief of Kurunta on the southern plateau near Konya is evidence for the northward extension of Tarhuntassa's claim of territorial hegemony over this region at the end of the LBA.

If we take Kilise Tepe as representative of the region of Tarhuntassa, we have to conclude a shift from stronger ties with the NCA plateau during the first half of the LBA to greater cultural independence in its final decades or century. In the light of other regions, where NCA ties gradually increase throughout the LBA, it seems possible that the cultural shift at Kilise Tepe may indeed have a political dimension to it. Postgate (2005, 29) has suggested a regionalisation of cultural traditions as part of the political independence of Tarhuntassa during the last phase of the Hittite imperial existence. The conscious choice of the adoption of a ceramic style that differs from that associated at least in its origins with the Hittite imperial centre clearly carries a symbolic message of cultural emancipation. At the same time, the use of NCA administrative technology, however, points towards close political interaction and perhaps the presence of personnel bearing official Hittite titles. An alternative explanation would be that these officials served an independent Tarhuntassa rather than a central Hittite authority, although an argument of cultural detachment as the expression of a political development runs into difficulties at this point. Whether one wishes to view the development of local ceramic styles as a sign of achieved political independence that requires the existence of an imperial ceramic standard in the first place or as the *process* of a projection of regional cultural and perhaps also political power, the situation at Kilise Tepe is intriguing and full of questions for future research.

It seemingly points towards the disenfranchised nature and, thus, conceptual alienability of the constituent aspects, and also the political affiliations, of the NCA cultural package. Future research at this site as well as the new excavations at Mersin and Tarsus, where similar painted traditions have begun to surface (Sevin and Köroğlu 2004, 81, Fig. 71; Ünlü 2005), can be expected to shed further light on this issue.

7.2.5.2. Region F

A number of archaeological traits indicate an increasingly close relationship between Region F and the Hittite heartland. The investigation of the ceramic evidence from Tarsus and a brief overview from neighbouring sites has identified a gradual increase in cultural influence from the central plateau from the LBA I. Diagnostic NCA plain ware types, however, do not seem to appear in quantity until the LBA II. Moreover, only about half of the published repertoire has clear formal links to the imperial core region, pointing, thus, to a cultural middle position.

In addition, the rock reliefs of Sirkeli, one of which depicts the Hittite great king Muwatalli II, signal strong imperial presence. At Tarsus, an LBA II monumental complex with NCA architectural affinities may indicate the concentration of state power at this site. Glyptic finds from a pit context at the same site include seal impressions of local royalty from the Old Hittite Period, the Kizzuwatnean wife of Hattusili III as well as those of princes in official administrative positions. The rock relief of Hamite and possibly also those on the northern end of communication routes between the two geographical entities indicate the use of landscape monuments local agents, proliferating their own hold over the area. From a wider regional perspective, Seton-Williams (1954) identified a dramatic increase in LBA settlement locations combined with a strong element of settlement continuity.

Documentary sources on the relationship between Hattusa and the political entity of Kizzuwatna outline a comparatively long developmental sequence that commenced

with animosity and was followed by parity agreements of increasing asymmetry to a subordinate political status for Kizzuwatna already in the Middle Hittite Period. During the imperial phase, the Hittite administration entertained a close relationship with Kizzuwatna underscored by a dynastic marriage and the overseeing of important cult activities by a member of the Hittite royal family. Mentioned also are centrally controlled institutions in the form of a store-house as well as the collection of levy from the region. During the second half of the LBA it thus appears that Kizzuwatna was an integral part of the Hittite imperial realm. The results of the four archaeological investigations in this thesis for the most part compare well with the textual-historical picture, but they offer a more nuanced local perspective.

A model of Hittite effective control over Region F in the second part of the LBA, but with the retention of local organisational principles and with the occasional challenge of local leaders, best fits the archaeological evidence at hand. Cultural interaction was comparatively intensive, as both archaeological and historical sources indicate but they concern very different practices and socio-political levels. The transformations in the ceramic repertoire are significant but not all encompassing, pointing at locally led dynamics of cultural adoption as well as an expression of a wider East Mediterranean and Western Asian trend towards the low labour investment in the production of utilitarian pottery.

7.2.5.3. Region G2

The developments in Region G2 in many respects resemble those of Region F. Archaeological evidence for inter-regional interaction with the NCA plateau includes ceramic connections already during the LBA I at Korucutepe and the use of NCA-style seals and administrative practices. As in the above case, the ceramic similarities are not all encompassing transformations of local cultural habits indicative either of demographic change or the deliberate imposition of standards of production. Unlike at Tarsus, however, these similarities are already strong in the first part of the LBA and

undergo changes parallel to those on the NCA plateau. The proportional dominance of the Korucutepe assemblage by shallow bowl types could be a sign of the use of this pottery in central consumption contexts similar to those of the Boğazköy-Hattusa Upper City.

The survey record for this region suggests an increase in particularly small sites during the LBA against a strong degree of settlement continuity at the top of the local settlement hierarchy and the increase in size of large centres. This may indicate the possible retention and enhancement of prevalent political structures. The largest settlement in the region was Norşuntepe with an estimated 8 ha LBA occupation, while the nearby Korucutepe with 2.6 ha total extent is much smaller. Excavations at both sites, however, have revealed a number of traits that rather point to Korucutepe as the region's administrative centre. This includes the seals and seal impressions of local royalty and of officials, some of whose first names at least match administrative personnel known from the Hittite capital. There is also a debate as to whether a substantial fortification wall dates to the MBA, as the original excavators suggested, or protected an LBA regional centre. Norşuntepe and, with few possible exceptions also Korucutepe, does not feature monumental buildings indicative of centralised state power. The only excavated LBA site in Region G2 with a monumental fortification wall and whose ceramic assemblage also displays some connections to the NCA plateau is Arslantepe. The site, thus, may have functioned as a fortified outpost under Hittite sway on the Anatolian side of the Euphrates. Absent from Region G2 are large-scale landscape monuments either of imperial or local authorship.

The textually documented relationship between the polity of Isuwa and the NCA plateau begins with what is described as an aggression against Hittite territories with the support of Mitanni in the Middle Hittite phase. Agreements and oaths of local elders alternated with rebellions until the military campaigns of Suppiluliuma I led to the

subjugation of Isuwa. Documents of the later imperial phase suggest peaceful interaction and the existence of a vassal king, who fulfilled an important role in the worship of the local weather-god and was a witness in Hittite treaties. On the spectrum of "ideal" types and degrees of imperial-local relationships, the situation in Region G2, similarly to Region F, may be characterised as "intensive hegemony".

7.2.5.4. Region H

Following the Euphrates downstream, archaeological work has concentrated on a narrow stretch along the river with striking results for the LBA occupation of this region. Field surveys in the Adıyaman and Carchemish dam regions found there to be a dramatic decline of settlement numbers in the 2nd millennium BC. Although unrecognised local ceramic traditions cannot entirely be discounted, excavations at the main mounds in Region H largely confirmed the impression of a comparatively empty countryside that was dominated by a number of strategically located strongholds from Tille and Lidar Höyük to the unexcavated capital of the Hittite viceregal dynasty at Carchemish.

The LBA II pottery assemblage from Tille Höyük underwent a distinctive transformation from hand-made ware with combed decorations and a painted tradition in the earlier levels to a wheel-made production, whose plain and hastily produced open shapes show generic connections to the NCA material. The continued use of organic temper throughout the LBA II and transitional levels adds a clearly local technological component that makes propositions of imperial standards or control of production questionable. Two NCA biconvex seals establish connections of a more direct kind with the imperial core region. Large-scale architectural remains also characterise the LBA settlements at Lidar Höyük, including a LBA II storeroom with hieroglyphic seal impressions of Kuzi-Tesub of Carchemish, potentially hieroglyphic potmarks on storage jars and an LBA Egyptian style chariot wheel (Littauer, Crouwel and Hauptmann 1991, 352-358). The LBA pottery at Lidar Höyük is said to share traits to both Cilicia (Tarsus

LB II) as well as Syrian traditions (Hauptmann 1987, 204). On the basis of this archaeological evidence, Hittite control over this area, exerted via Carchemish, seems likely even if, as seen in Chapter 4, the pottery from Tille Höyük is not an expression of direct control but formed seemingly part of a local cultural (re-)orientation towards the NCA plateau as well as a wider cross-regional trend.

Difficulties in the exact location of Hittite toponyms and relatively scant mentions of those probably located in the region of the Lower Turkish Euphrates allow little more than the constitution of various military confrontations under Mitanni influence in the first part of the LBA and a subsequent conquest by Suppiluliuma I.

7.2.5.5. Region J

Direct archaeological evidence for inter-regional interaction between Region J and the NCA plateau declines from the Turkish Euphrates and manifests itself chiefly in the presence of NCA administrative technology and, in some areas, the local adoption and hybridisation of this glyptic style. Two of the most important sites for the investigation of Hittite rule in northern Syrian, Carchemish and Aleppo, have not so far yielded LBA occupation levels.

LBA north-Syrian pottery traditions are different from those of central Anatolia but they share common traits from standardised appearances and simple character to some formal similarities related to routinised and potentially large-scale production procedures. Together with similar trends in other Western Asian and East Mediterranean ceramic traditions this implies the need for a research perspective broader than any single political or imperial entity and that encompasses a wider, probably economic, interaction sphere and changing perceptions of value.

During the LBA, a number of differences in the regional settlement developments as well as in the adoption of NCA administrative styles can be identified between coastal

and inland northern Syria. Throughout the 2nd millennium BC but particularly in the LBA, western Syria as well as the intermediate region between the coast and the Euphrates appears to have experienced a decline in settlement numbers.

7.2.5.5.1 Region J1

Similar to Regions F and G2, local MBA centres such as Tell Atchana-Alalakh and Ras Shamra-Ugarit retained and expanded their position atop local settlement hierarchies, suggesting a relative continuity in political and economic structures. The two sites and polities, however, appear to have stood in somewhat different inter-regional relationships with the NCA plateau and the Hittite imperial authority. Tell Atchana-Alalakh shows signs of relatively strong connections that apparently include architectural and iconographic influences but also various forms of administrative technology suggestive of Hittite involvement and of a local orientation towards Anatolia, among many other cultural influences. According to the textual sources, Atchana-Alalakh, the capital of the kingdom of Mukish, was conquered by Suppiluliuma I, who appears to have resided there while accepting the submission of the Ugaritic and other north-Syrian kings. Following a rebellion, the territory of Mukish was placed directly under the rulership of the king of Carchemish, as was the formerly Ugaritic vassal of Siyannu.

The city of Ugarit, which flourished as a trade *entrepôt* during the 14th and 13th centuries BC, was indirectly ruled by the Hittite administration according to the textual sources. The only convincing archaeological evidence for strong inter-regional relationships with central Anatolia are the cuneiform tablets and seal impressions of Hittite royalty and officials that detail the nature of this imperial relationship.

In contrast to the material from Meskene-Emar, the archives at Ras Shamra-Ugarit evidence a regular to and fro between the Hittite great king and his chancellery at Hattusa and the Ugaritic court, while internal matters were entirely left in the hands of

the local administration. This may well be a measure of the importance of Ugarit for the Hittite empire as well as the relative ease with which a complex but militarily weak society may be incorporated within a hegemonic system of control. From the correspondence with the Hittite court, however, it is evident that Ugarit's kings felt increasingly emboldened to disobey orders and to assert their own position between Egypt, Assyria and the Hittite empire. The material culture evidence from Ugarit clearly corroborates the city's cosmopolitan character but it also testifies to the deliberate choice in its cultural affiliations with a rival imperial power. Unlike other northern Syrian polities, Ugarit's elite showed little interest in the emulation or adaptation of either NCA glyptic style or administrative practices in the same way as it adhered to its, on the one hand independent, and on the other very Egyptian orientated cultural traditions.

7.2.5.5.2. Region J2

The intermediate region between the coast and the Euphrates is only little explored archaeologically. The site of Umm el-Marra, the centre of a vassal kingdom of Mukish, retained its position atop the local settlement hierarchy during the LBA but the site and the region around it experienced an internal down-scaling that included the disappearance of its fortification wall and previous public buildings (Curvers and Schwartz 1997; Schwartz et al. 2000).

7.2.5.5.3. Region J3

The northern Syrian Euphrates region underwent a rather different settlement trend to that of the coastal and transitional areas. Established MBA centres increased in size along the Euphrates during the LBA. Many of these sites display an emphasis on defensive architecture but at the same time have not yielded evidence for palatial structures with the exception of Meskene-Emar. All of these characteristics have in the past been associated with Hittite rule over the area.

The best archaeological indicators for inter-regional interaction with the Hittite political and NCA cultural realm are NCA administrative implements. These have been found in large numbers at the site of Meskene-Emar, located on the southward bend of the Euphrates. Unlike at Ugarit, the glyptic repertoire includes the traditional Syrian cylinder seals, NCA types as well as a hybrid "Syro-Hittite" tradition, the latter two styles being used on NCA tablet formats and sealing practices. In the light of the textual and archaeological sources it, thus, seems that Hittite control over Emar, as at Alalakh, was of a much more direct and locally administered nature than that held over Ugarit.

7.3. Overlapping Networks of Interaction

From a broader perspective, the analysis of four archaeological data categories for the type and degree of inter-regional interaction between the Hittite imperial core area and its surrounding regions has produced four chronologically and spatially overlapping, but by no means congruent or concentric, patterns of inter-regional relationships (Map 51 and Map 52).

The focal point of all four elements of interaction is the central Anatolian plateau. This may not be surprising, but a closer inspection of the developments in the extended core region of the Hittite empire has revealed a number of interesting developments, which underline that we are dealing with a process of imperialism that is neither complete nor uncontested in its closest periphery and throughout its existence. Although Hittite textual sources do indirectly concede the instability of Hittite control through their concern with rebellions and military campaigns, we are told comparatively little about the substance of strategies of control and integration and the length of time it took to implement them.

The survey data from Region A, despite its very obvious limitations, when analysed through a comparative and diachronic perspective, indicates a process of spatial transformation that affected first the eastern and then the southern plateau and that is suggestive, as I have argued, of strategies of territorial integration and the imposition of a truly territorial mode of government. This spatial signature, however, was not found outside Region A. To the north, linear arrangements of fortified settlements and the scarcity of LBA materials beyond these mark a frontier of Hittite effective control. The fringes of the central plateau and particularly its access routes were guarded by imperial landscape monuments and challenged by local agents using the same symbolic canon to project their own territorial hegemony over the physically, politically and ideologically liminal.

The sphere of NCA cultural influence, here examined through the distribution of NCA ceramic traits, stretches beyond the area affected by the spatial transformation of directly controlled regions and the area inside the braces of imperial landscape monuments. This applies to the extent of a ceramic zone characterised by the exclusive or predominant use of NCA pottery and for a range of functional types that extended westwards to include Region C1 and southwards to the Cilician Gates. The sphere of less intensive NCA ceramic influence, however, displays a south and eastward focus. Ceramic similarities in Regions E to H, however, differ chronologically and in intensity, suggesting a series of local processes of adoption rather than the deliberate imposition of imperial cultural elements on surrounding territories. Settlement patterns in southern and south-east Anatolia indicate a stronger degree of continuity in local hierarchies. Areas to the west of the central plateau showed little or no interest in the NCA plain ware traditions.

The distribution of NCA administrative technology seemingly matches that of ceramic influences, but reaches beyond it into northern Syria, where it constitutes the only

tangible indication of high-level inter-regional interaction and imperial control. This took the form of sealed documents and correspondence at Ras Shamra-Ugarit, Hittite language tablets at Atchana-Alalakh, as well as the presence of both NCA seals and sealing practices at Meskene-Emar and Tell Fray. In addition, NCA cultural influence is evident in the development of a local, hybrid glyptic style. The evidence from Anatolian find-spots, particularly from Kilise Tepe, Tarsus and Korucutepe underlines the relative intensity in inter-regional relations between these sites and the Hittite core region. West of the central plateau, seals and seal impressions of this kind have come from Region C2 and in one instance from Troy. In general, however, west Anatolia was not part of this sphere of administrative interaction in the same way as it was not touched by the NCA ceramic phenomenon. Unlike south-eastern Anatolia and north-Syria, west Anatolian elites developed a taste for large-scale landscape monuments.

7.4. An Archaeological "Map" of Hittite Control, Interaction and Contact

From these patterns, illustrated in Map 52, I tentatively propose, on the basis of archaeological evidence:

1) A sphere of increasingly materially manifested direct imperial control on the central Anatolian plateau.

2) In the south and east of this region, a pattern of spatial continuity and increase in smaller sites, the uptake of aspects of the NCA cultural package as well as evidence for central administrative efforts in addition to less directly tangible evidence such as the presence or absence of fortifications and monumental structures, all point to close inter-regional relationships between the Hittite core area and Regions E, F and G as well as, but to a lesser extent, Region H. The nature of these relations ranges somewhere between territorial and hegemonic rule but still involves localised leadership and immediate decision making.

3) Entering northern Syria, the elements of inter-regional contact become increasingly complex and difficult to disentangle. The distribution, type and local influence of NCA glyptic in different parts of northern Syria against the background of general settlement developments, however, suggests a relatively close involvement of Hittite officials in the government of the Euphrates region. A more hands off "ideal" type of hegemonic control but conducted mostly by Hattusa may be postulated for the case of Ugarit, whose cultural taste as well as administrative practices retain a fiercely independent character.

4) The absence of effective control is relatively clear in the archaeological record of northern and north-eastern Anatolia. Similarly, western Anatolia displays no tangible archaeological signs of Hittite government or, with the exception of monumental display, of cultural interaction. Future fieldwork may change this picture, but as yet the archaeological record of western Anatolia displays less evidence for even hegemonic control than the kingdom of Ugarit, whose cultural affiliations seem deliberately non-Anatolian. What is evident from Ugarit, however, is the strong administrative interest in the form of correspondence and instructions on the side of the Hittite court that has yet to be recovered at west Anatolian locations.

7.5. Summary and Wider Perspective

This thesis has demonstrated that an archaeological perspective on Hittite imperialism independent of, but in combination with, traditional historical frameworks is possible through the comprehensive analysis of archaeological data that are indicative of a variety of inter-regional interaction levels and through the lens of a theoretical model informed by broad imperial analogy and asymmetrical interaction networks. Such an approach, despite its present limitations, is vital for the advancement of our understanding of the Hittite imperial and other large-scale socio-political entities, in particular from the point of view of local societies and the different social levels within

these. Contrary to Larsen's (1979b, 83) proposition, cited in Chapter 1, this thesis has established that when viewed from various regional perspectives, Hittite imperial relationships were far from simple but rather complexly nuanced in their degrees of contact, interaction and control and at times at odds with the textual accounts. The refinement of these regional perspectives and the testing of causal relations between material transformations and Hittite imperialism is a task for future field research, which includes the improvement of our understanding of LBA settlement systems and their transformations from the previous and in subsequent socio-political systems as well as the organisation of regional ceramic production and consumption contexts.

Returning to a wider perspective, some conclusions can be drawn from the results of the analyses in this thesis with respect to theoretical and analytical models on imperial systems and inter-regional interaction. On a general note, a chronologically as differentiated as possible approach to the Hittite empire and its inter-regional relationships has underlined the importance of temporal factors in the establishment, shift and transformation of imperial-local relationships. Rather than viewing different archaeological categories as contemporaneous indications of imperial grandeur, a more nuanced approach has demonstrated, even if tentatively at the moment, that the imperial project was a process not an event and that inter-regional relations were part of a constant re-negotiation of power-relationships (also Schreiber 2005). This element of uncertainty and perpetual struggle for supremacy is indicated in the textual-historical sources but, in the past, has been attributed little importance in the perception of archaeological evidence for such interaction.

Some of the hypotheses or predictions advanced in Chapter 2, and the analytical models they are grounded in, require revision in respect of the results of Chapters 4 to 6. The core-periphery perspective has been demonstrated to fail as a predictive model not only for the expected underdevelopment of peripheral polities, which Kohl (1987,

20-21) already pointed out, but both survey results and the spatial distribution of evidence for cultural interaction suggest a mismatch between the theoretical model and the archaeological record in other regions of the Hittite empire. While Ugarit is the most shining and well documented example for a flourishing trading city as part of a political network of domination, its material culture yields exceedingly little evidence for NCA Anatolian cultural influence. Other peripheral regions that seemingly prospered as part of the Hittite empire are Regions F and G, while western Anatolia (Region D), which according to the texts was under Hittite imperial rule in the second part of the LBA, shows little cultural inclination towards its overlord beyond a taste for large-scale monumental representations. The concept of a periphery in the sense of the provider of raw materials and the recipient of products and practices, particularly those under hegemonic rule, do not coincide in the case of the Hittite empire.

Along the same lines, the strict distinction between territorial integration and hegemonic rule and the respective expectations of material expression of these categories does not work entirely for the Hittite case, which seems to have included three levels of archaeologically visible relationships. These range from cultural and territorial integration on the central plateau to mainly political relations in the case of Ugarit. The regions between central Anatolia and northern Syria present a third mode of imperial control and inter-regional interaction. In the past chapters I have termed this form of imperial rule "intensive hegemony". While seemingly taking different shapes in the affected regions, a general trend towards local settlement stability and increase in site numbers went hand-in-hand with the intensification of cultural ties in the form of NCA-style ceramic consumption in some of these areas. On a higher political-administrative level, glyptic finds from these regions indicate the presence of, or at least interaction with, imperial administrative personnel as well as the uptake of NCA glyptic traditions by regional power-holders. In the sphere of ideological projections of territorial hegemony too local agents have seemingly adapted imperial iconographic

canons in the negotiation of central supremacy. In fact it would seem that internal decentralising forces clearly expressed in the authorship of landscape monuments along the fringes of the Hittite core region and also perhaps in the introduction of different cultural traditions such as painted pottery in southern Anatolia may in the past have been overlooked as expressions of increasing decentralisation, rather than signs of achieved independence or the aftermath of imperial collapse (e.g. Postgate 2005).

Locations for future research into the questions thrown up by this thesis have to be not only regions of economic interest to the Hittite administration as reflected in the textual record, but transitional areas between the core region and its most important dependencies. As shown in Chapter 3, these areas received little attention in Hittite texts. From what can be gauged, however, a relatively volatile political climate seemingly characterised these areas, whose lower socio-political complexity posed at times a problem for Hittite effective control. This may, however, equally have affected potentially more powerful rivals to the west and south, and thus, providing a fragile equilibrium on whose balance the fate of the Hittite imperial venture rested. The archaeological exploration of these transitional regions is, thus, a crucial aspect of future research into the workings of this imperial system, which may help us to understand the importance of intermediate power bases such as Carchemish in economically as well as militarily-strategic parts of the empire and their subsequent rise to independent power.

Contact, Interaction, Control –

The Archaeology of Inter-Regional Relations in Late Bronze Age Anatolia

Volume II

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APPENDIX 1: CHRONOLOGY

Questions of relative and absolute chronologies in Anatolia and other regions of the East Mediterranean and Western Asia and their synchronisation have been at the centre of a series of recent discourses. In addition to earlier approaches (Ehrich 1992; Åström 1987), recent research fora include the *Synchronisation of Civilisations of the Eastern Mediterranean in the Second Millennium B.C.* (Bietak 2000 and 2003), the *Colloquium of Ancient Near Eastern Chronology (*Tanret 2000) as well as the workshop on *Strukturierung und Datierung der hethitischen Archäologie* (Mielke, Schoop and Seeher 2006) that is concerned with LBA Anatolia in particular. The results of the latter discussion and research in the different disciplines that they are grounded in have overthrown a number of well-established "truths" of LBA Anatolian chronology that will require a reconfiguration of particularly the archaeological perspective. They include the conventional dates of the Upper City of Boğazköy-Hattusa (e.g. Klinger 2006; Seeher 2006) and other sites such as İnandık Tepe (Mielke 2006b).

While the wider discussion concerns itself with the question of *High, Middle or Low?* (Åström 1987; Wilhelm and Boese 1987) or indeed of Ultra-low? (Tanret 2000; Beckman 2000), the chronology of 2nd millennium BC Anatolia is wrought with much more basic difficulties. Among those problems are the uncertainties of incomplete king-lists, the synchronisation with those of Mesopotamia and Egypt as well as the establishment of a connection with absolute chronological themes (Bryce 1998, 408-414; Beckman 2000). Even more problematic is the interconnection of the Anatolian textual record with relative archaeological measures of time. As recent research is increasingly laying bare (Mielke, Schoop and Seeher 2006), past attempts to do so have been highly unsatisfactory. The practice of ready connections of archaeological data with events of the textual-historical records and the perceived supremacy of the

latter over the former pose a particular problem in the Anatolian case. Conversely, the construction of a relative archaeological chronology on the basis of ceramic evidence faces its own deep-rooted problems due to the stylistic conservatism of NCA repertoires (Schoop 2003a,b; 2006; forthcoming). These issues have received detailed attention in *Strukturierung und Datierung der hethitischen Archäologie* (Mielke, Schoop and Seeher 2006) and relevant aspects of this discussion to the materials analysed in this thesis are referred to in the appropriate places in the main text. Important here is the realisation that both the Anatolian textual-historical and archaeological relative chronologies are still floating and that their inter-connection is currently under review. In this way, the absolute dates proposed here for both historical personages and events as well as archaeological processes are broad indications negotiable in the light of future research as well as the overall discussion on whether a high, middle, low or ultra-low chronology should be adopted in the wider East Mediterranean and Western Asian region.

As yet, no broad consensus exists among Anatolian historians as to which chronological scheme fits best with the available evidence. Advocates of the short/low chronology include, for instance, Kühne (1987), Wilhelm (2004) and Starke (1998 cf. Dinçol 2006), while Beckman (2000, 25), Klengel (1999, 392-393) and Bryce (1998, 414) adhere to the middle chronology. However, even among scholars subscribing to the same broad chronological subdivisions disagreement exists about the exact number of Hittite kings and the absolute dates of their reigns (Dinçol 2006, Abb. 1 – 4). Consensus similarly lacks among archaeologists, with, for instance, Gorny (1989) and Müller-Karpe (2003) preferring a low chronological framework and Mielke (2006b, 271-272) proposing a fit of archaeological data from Kuşaklı-Sarissa and İnandık with the middle, or a shortened middle chronological scheme.

Another question for archaeology is the division of the LBA into two (Old Hittite and Empire Period) or three (Old Hittite, Middle Hittite and Empire Period) sub-phases. Although, increasing philological and historical evidence consolidates a tripartite chronological system, archaeological evidence for a similar subdivision is only slowly emerging (Müller-Karpe 2003).

LBA Anatolian chronology at this point in time is, thus, an approximate framework in terms of both its textual-historical and archaeological building blocks. The research conducted in this thesis for the most part uses data with temporal resolutions much broader than the decades at stake in the historical discussion. With the exception of the analyses in Chapter 6, these problems are, therefore, of less immediate concern in this study. In view of the current re-dating and re-structuring processes in LBA Anatolian archaeology, it also does not seem wise to take sides with either the Middle or Low Chronology camp until further research is conducted and made available. Table 1, therefore, includes the average dates of Hittite great kings in both schemes.

Table 1: Hittite king list according to the Middle and Low Chronologies

Hittite King List	Middle Chronology (BC)	Low Chronology (BC)
Old Hittite Period (OH)		
Hattusili I	1650-1620	1570-1540
Mursili I	1620-1590	1540-1530
Hantili I	1590-1560	1530-1500
Zidanta I	1560-1550	1500-1490
Ammuna	1550-1530	1490-1470
Huzziya I	1530-1525	1470-1465
Telipinu	1525-1500	1465-1440
Middle Hittite Period (MH)		
Tahurwaili	1500-	1440?-
Alluwamna		1440-1430
Hantili II		1430-1420
Zidanta II		1420-1410
Huzziya II		1410-1400
Muwatalli I	1450?	1400?
Tudhaliya I(II)	1450-1420	1400-1380
Arnuwanda I	1420-1400	1380-1360
Tudhaliya II(III)	1400-1380	1360-1343
Tudhaliya III?	1380?	1343?
Hattusili II?	?	?
Empire Period (EP)		
Suppiluliuma I	1380-1340	1343-1322/18
Arnuwanda II	1340-1339	1322/18
Mursili II	1339-1306	1322/18-1296
Muwatalli II	1306-1282	1296-1273
Mursili III	1282-1275	1273-1266
Hattusili III	1275-1250	1266-1235
Tudhaliya IV	1250-1220	1235-1215
Kurunta?	?	?
Arnuwanda III	1220-1215	1215-1210
Suppiluliuma II	1215-1200	1210-1200

Sources: modified after Dinçol (2006, Abb. 4 after Gorny 1989)

Appendix 2: Catalogue of Surveyed LBA Sites in Anatolia

The following table contains all surveyed LBA sites included in the database and analysis in Chapter 5, ordered by site-size. Site IDs correspond to numbers on Map 40 to Map 45.

ID	Site	ha	Type	CHA	EBA	MBA	MBA-LBA	LBA	OH	EP	IA	Province	District	Publication	Publ. Nr.
1	Boğazköy-Hattusa	180	Mountain	1	1	1	1	1	1	1	1	Çorum			
2	Sulutaş	47.1	Höyük	1	1	0	0	1	0	0	0	Konya	Selçuklu	Bahar 2001	113.05, 01-38
3	Troy (total)	33?	Höyük	0	1	1	1	1	1	1	1	Çanakkale		Korfman	
4	Asağı Kalaca	26	Höyük	0	0	0	0	1	0	1	0	Sivas	Ulaş	Ökse 2001b	99-86-87
5	Kalkankaya	24		0	1	1	0	1	0	1	1	Sivas	Yıldızeli	Ökse 1999	97-71
6	Varavan Höyük	20.4	Höyük	0	1	1	1	1	1	0	0	Ankara	Şereflikoçhisar	Omura 1993	91-27, 03-20
7	Kayalıpınar Harabesi	20	Höyük	0	1	1	0	1	1	1	0	Sivas	Yıldızeli	Ökse 1994	92-03
8	Kökez Höyük	19.6	Höyük	1	1	1	0	1	0	0	1	Konya	Kadınhanı	Bahar 1997	107.09
9	Kara Pınar	19.6	Slope	0	1	1	0	1	0	0	1			Kealhofer 2005	48
10	Kuşaklı Höyüğü	18.2	Höyük	0	0	0	0	1	1	1	1	Sivas	Şarkişla	Ökse 1994	92-07
11	Höyük-Altılar	18	Höyük	0	1	0	0	1	0	0	1	Konya	Kulu	Omura 2005	04-18
12	Norşun Tepe	16	Höyük	0	1	1	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	O54/8
13	Gubat Şehri	15.7	Slope	0	1	0	0	1	0	0	1	Kırıkkale	Çelebi	Omura 2003	02-069
14	Gordion (Yassihöyük)	13	Höyük	0	1	1	0	1	0	0	1			Kealhofer 2005	38
15	Aktepe (Bolus)	12.6	Höyük	0	1	1	0	1	1	1	1	Tokat		Özgüç 1978	
16	İşgalaman Çingen H.	11.8	Höyük	1	1	1	0	1	0	0	0	Konya	Karatay	Bahar 1999	117.03, 99-27
17	Seydişehir II	11.8	Kale	0	0	0	0	1	0	0	1	Konya	Seydişehir	Bahar 1999	119.03, 99-17

ID	Site	ha	Type	CHA	EBA	MBA	MBA-LBA	LBA	OH	EP	IA	Province	District	Publication	Publ. Nr.
18	Azak Kalesi	11.3	Höyük	0	0	0	0	1	0	0	0	Konya	Cihanbeyli	Omura 2001b	99-28
19	Sur Tepesi	10.5	Höyük	0	0	0	0	1	0	1	0	Sivas	Merkez	Ökse 2000b	98-11
20	Tell Atchana (Alalakh)	10.1	Höyük	0	0	1	0	1	0	0	0			Casana & Wilkinson 2005	AS136
21	Çopuroğlanın Çukur	10	Höyük	1	0	0	0	1	0	0	1	Ankara	Şereflikoçhisar	Omura 2004	03-38
22	Çavuş Höyüğü	9.8	Höyük	0	1	1	0	1	0	0	1	Konya	Höyük	Bahar 2001	111.05, 01-11
23	Susan Höyük	9.8	Höyük	0	0	0	0	1	0	0	1	Karaman	Merkez	Bahar 2002a	201.03
24	Yoğunhisar	9	Höyük	0	1	1	1	1	0	0	1	Yozgat	Boğazlıyan	Omura 1992	90-27
25	Maşat Höyük	8	Höyük	0	1	1	1	1	1	1	0	Tokat	Zile	Özgüç 1978 and 1982	excavated
26	Küçük Göl	8	Slope	0	0	0	0	1	0	0	1	Konya	Kulu	Omura 2005	04-08
27	Sırnık Höyük	7.9	Höyük	0	0	0	0	1	0	0	1	Konya	Karapınar	Bahar 2001	122.09, 01-09
28	Çelebi Sami Yaylası	7.9	Höyük	0	1	0	0	1	0	0	1	Konya	Kulu	Omura 2005	04-38
29	Höyük Tepe	7.7	Höyük	0	0	0	0	1	0	0	1	Konya	Cihanbeyli	Omura 2001b	99-04
30	Gerdekkaya	7.5		0	1	1	0	1	1	1	1	Sivas	Yildizeli	Ökse 1999	97-83
31	Büyükkale	7.5		0	1	1	1	1	0	0	1	Kırşehir	Akpınar	Omura 2002	01-11
32	Konar Höyük	7	Höyük	0	1	1	0	1	0	0	1	Konya	Sarayönü	Bahar & Koçak 2004	108-02
33	Başhöyük	7	Höyük	1	1	1	0	1	0	0	1	Konya	Sarayönü	Bahar & Koçak 2004	108.07
34	Kuyulusebil Höyük	7	Höyük	0	0	1	0	1	0	0	1	Konya	Sarayönü	Bahar & Koçak 2004	108.14
35	Zoldura Höyük (Lystra)	7	Höyük	1	1	1	0	1	0	0	1	Konya	Meram	Bahar 1999	116.14, 99-05
36	İslihisar Höyük	7	Höyük	0	1	0	0	1	0	0	0	Karaman	Merkez	Bahar 2001	201.08, 01-28
37	Yobaltık (Çiftlik) Höyük	7	Höyük	0	1	0	0	1	0	0	1	Konya	Ilgın	Bahar & Koçak 2004	106.14
38	Yalnız Ağıl	7	Höyük	1	0	0	0	1	0	0	1	Ankara	Şereflikoçhisar	Omura 2004	03-31
604	Gözlu Kule - Tarsus	7	Höyük	1	1	1	0	1	0	0	1			Goldman 1956	excavated
39	Acemi Höyüğü	6.9	Höyük	1	0	1	1	1	0	0	1	Ankara	Şereflikoçhisar	Omura 1994	92-05, 03-21
40	Könk Höyük	6.9	Höyük	1	1	1	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	O54/7

ID	Site	ha	Type	CHA	EBA	MBA	MBA-LBA	LBA	OH	EP	IA	Province	District	Publication	Publ. Nr.
41	Alaca Höyük	6.9	Höyük	0	1	1	1	1	1	1	0	Çorum		Kocak	excavated
42	Karatepe	6.5	Höyük	0	1	1	1	1	1	0	1	Konya	Cihanbeyli	Omura 2000	98-68
43	Şirin Şehir	6.5	Slope	0	1	0	0	1	0	0	1	Konya	Kulu	Omura 2005	04-42
44	Elemenli (Höyüğü I)	6.3	Höyük	0	1	0	0	1	0	0	1	Ankara	Sereflikoçhisar	Omura 1994	92-03, 03-25
45	Maltepe	6.3	Höyük	0	0	1	0	1	1	1	0	Çankırı	Eldivan	Matthews	98.183
46	Byükkaletepe	6.2	Höyük	0	1	0	0	1	1	0	1	Kırıkkale	Keskin	Omura 1993	91-09
47	Kızılcakışla Kalesi	6		0	0	0	0	1	0	1	0	Sivas	Şarkışla	Ökse 2001b	99-01; 98-41
48	Oluz Höyük	5.9	Höyük	0	1	1	0	1	0	0	1	Amasya	Merkez	Dönmez 2002	02-22 (67)
49	Akören Karahöyük	5.9	Höyük	1	1	0	0	1	0	0	1	Konya		Bahar 1999	120.02, 99-12
50	Kara Yuğ	5.7	Höyük	0	1	0	0	1	0	1	1	Konya	Selçuklu	Omura 2001b	99-64
51	Havuz	5.7	Slope	0	0	0	0	1	0	0	1	Konya	Kulu	Omura 2005	04-12
52	Tepecik (Makaraz Tepe)	5.3	Höyük	1	1	1	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	O54/2
53	Hanköyük (Çalören)	5.3	Höyük	0	1	1	1	1	0	0	1	Ankara	Şereflikoçhisar	Omura 2004	03-43
54	Karataş	5.1	Höyük	0	0	0	0	1	0	0	1	Amuq		Casana & Wilkinson 2005	AS151
55	Güneykaya	5	Höyük	0	1	1	0	1	0	0	1	Sivas	Yıldızeli	Ökse 1996	94-33
601	Yumuktepe-Mersin	5	Höyük	1	1	1	0	1	0	0	1			Seton-Williams 1954	
56	Göktömek	4.9	Höyük	0	0	0	0	1	0	1	0	Konya	Koratay	Omura 2001a	00-19
57	Yeşildon	4.9		0	1	0	0	1	0	0	0	Alpu		Efe 1996	160
58	Höyük Sofular	4.7	Höyük	0	1	1	1	1	0	0	1	Ankara	Bala	Omura 1995	93-16
59	Doğantepe	4.7	Rock	0	1	1	0	1	1	1	1	Amasya	Merkez	Dönmez 2002	02-21 (29)
61	Tatlıkuyuhöyüğü	4.6	Höyük	0	1	0	0	1	0	1	1	Konya	Selçuklu	Omura 2001b	99-40
62	Höyük Akpınar	4.5	Höyük	0	1	0	0	1	0	1	1	Kırşehir	Kaman	Mikami & Omura 1988	86-12, 00-24
63	Tülin Tepe	4.2	Höyük	1	1	1	0	1	0	0	0	Elâzığ	Merkez	Whallon 1979	O54/1

ID	Site	ha	Type	CHA	EBA	MBA	MBA-LBA	LBA	OH	EP	IA	Province	District	Publication	Publ. Nr.
64	Kültepe-Deliler Çiftliği	4.1	Höyük	0	1	1	1	1	0	0	1	Ankara	Bala	Omura 1995	93-06
65	Gediksaray Höyüğü	4.1	Höyük	0	1	1	0	1	0	0	1	Amasya	Göynücek	Dönmez 2002	02-24
66	Höyük Sarıoba	4	Höyük	0	1	1	1	1	0	0	1	Ankara	Polatlı	Omura 1996a	94-33
68	Aşağı Çiğil-Öziçi	3.9	Höyük	1	1	1	0	1	0	0	1	Konya	Ilgın	Bahar 2001	106.22, 01-03
69	Kilise Tepe	3.9	Höyük	1	1	0	0	1	0	0	0	Elâzığ	Merkez	Whallon 1979	O54/20
70	Çayhatap Höyüğü	3.9	Höyük	0	1	0	0	1	1	0	0	Çorum	Sungurlu	Yıldırım & Sipahi 2004	02-01
71	Üzerliktepe	3.9	Höyük	0	0	0	0	1	0	0	1	Kırşehir	Akpınar	Omura 2002	01-14
72	Lidar Höyük	3.8	Höyük	1	1	1	0	1	0	0	1	Urfa	Bozova	Özdoğan 1977	T51/40
73	Kuyusuz Çukur	3.8		0	1	0	0	1	0	0	1	Ankara	Şereflikoçhisar	Omura 2004	03-29
74	Ilca Tepe	3.7	Höyük	0	0	0	0	1	0	0	1	Konya	Cihanbeyli	Omura 2001b	99-07
75	Muratlı	3.6	Höyük	0	0	1	1	1	0	0	1	Aksaray	Ortaköy	Omura 1997	95-06
76	Karalar Yaylası	3.5	Höyük	0	0	0	0	1	0	1	0	Konya	Cihanbeyli	Omura 2001b	99-31
77	Tepekütüğün (Kültepe)	3.5	Höyük	0	1	0	0	1	1	0	1	Çorum	Bayat	Sipahi & Yıldırım 2001	99-06
78	Kızlar/Karga Höyük	3.4	Höyük	0	1	1	1	1	0	0	1	Kırşehir	Kaman	Mikami & Omura 1988	86-05
79	Sağmal	3.4	Höyük	1	1	1	1	1	0	0	1	Kırşehir	Merkez	Omura 1997	95-02, 02-005
80	Kinet Höyük	3.3	Höyük	0	0	1	0	1	0	0	0			Seton-Williams 1954	6
81	Kale Mevkii Dumanlı	3.3	Flat	0	0	1	0	1	1	0	0	Çankırı	Kurşunlu	Matthews	97.057
82	Çayözü Höyük	3.2	Höyük	0	1	1	1	1	0	0	1	Kırsehir	Kaman	Mikami & Omura 1988	86-08
83	Pirot Höyük	3.2	Höyük	1	1	1	0	1	0	0	1	Malatya	Merkez	Özdoğan 1977	P51/15
84	Yassı Ören	3.1	Slope	0	0	0	0	1	0	1	0	Konya	Cihanbeyli	Omura 2001b	99-02
85	Yuğ-Asağıpınarbaşı	3.1	Höyük	0	1	1	1	1	0	1	0	Konya	Selçuklu	Omura 2001b	99-66
86	Akdoğan Höyük	3.1	Höyük	1	1	1	0	1	0	0	0	Konya	Sarayönü	Bahar & Koçak 2004	108.03
87	İbrahim Dede Höyügü	3.1	Höyük	0	0	0	0	1	0	0	1	Konya	Sarayönü	Bahar & Koçak 2004	108.04

ID	Site	ha	Type	CHA	EBA	MBA	MBA-LBA	LBA	OH	EP	IA	Province	District	Publication	Publ. Nr.
88	Ertuğrul Höyük	3.1	Höyük	1	1	1	0	1	0	0	1	Konya	Sarayönü	Bahar & Koçak 2004	108.12
89	Yaylapınar Höyük	3.1	Höyük	1	0	1	0	1	0	0	1	Konya	Meram	Bahar 1999	116.04, 99-30
90	Süleymanhacı Höyük	3.1	Höyük	1	1	1	0	1	0	0	1	Karaman	Merkez	Bahar 2001	201.04, 01-25
91	Domuzboğazlaya Höyük	3.1	Höyük	0	1	1	0	1	0	0	1	Konya	Çumra	Bahar 2002a	121.09
92	Boğazkent (Resadiye) Höyük	3.1	Höyük	0	0	0	0	1	0	0	1	Konya	Ilgın	Bahar & Koçak 2004	106.15
93	Höyük Çalış	3	Höyük	0	1	1	1	1	0	0	1	Ankara	Haymana	Omura 1995	93-43
94	Mancılık Kalesi	3	Kale	0	1	1	0	1	0	0	1	Sivas	Kangal	Ökse 1995	93-22
95	Göktepe	3	Höyük	1	1	1	0	1	0	0	1	Tuceli	Akpazar	Whallon 1979	N55/1
96	Höyük Tatar Yeğenağa	3	Höyük	0	1	1	1	1	0	0	1	Kırsehir	Mucur	Omura 2002	01-83
97	Höyük Dedeli	2.9	Höyük	0	1	1	1	1	0	0	1	Kırsehir	Merkez	Omura 1997	95-11, 02-008
98	Toprakkale	2.9	Höyük	0	0	1	1	1	0	0	1	Konya	Cihanbeyli	Omura 2001b	99-05
99	Hacıköy Höyüğü	2.9	Höyük	1	1	0	0	1	1	0	1	Çorum	Sungurlu	Sipahi & Yıldırım 2004	02-02
100	Ilgın Höyük	2.9	Höyük	0	0	1	0	1	0	0	1	Konya	Ilgın	Bahar 2002b	02-01
101	Hashöyük	2.9	Höyük	1	1	0	0	1	0	0	1	Kırsehir	Merkez	Omura 2002	01-17
102	Eskiçeşme	2.8	Höyük	0	1	1	1	1	0	0	1	Kayseri		Omura 1992	90-30
103	Oymaağaç Höyük (H. Tepe)	2.8	Höyük	0	1	1	0	1	0	0	1	Samsun	Verziköprü	Dönmez 2002	02-12
104	Tell Mirmiran	2.8	Höyük	0	1	0	0	1	0	0	1			Casana & Wilkinson 2005	AS120
105	Zank	2.7	Höyük	0	1	1	1	1	0	0	1	Nevşehir	Avanos	Omura 1992	90-33
106	Bıtık	2.7	Höyük	0	1	1	1	1	0	0	1	Ankara		Omura 1996a and b	94-18
107	Gıre Gord	2.7	Höyük	0	1	0	0	1	0	0	1	Konya	Kulu	Omura 2000	98-22, 04-09
108	Kılaşan Tepesi	2.7	Höyük	0	0	0	0	1	0	0	0	Kırsehir	Çiçekdag	Omura 2002	01-38
109	Aşağı Çeşme	2.7	Höyük	1	0	1	1	1	0	0	1	Konya	Kulu	Omura 2005	04-34

ID	Site	ha	Type	CHA	EBA	MBA	MBA-LBA	LBA	OH	EP	IA	Province	District	Publication	Publ. Nr.
110	Korucu Tepe	2.6	Höyük	1	1	1	0	1	1	1	1	Elâzığ	Merkez	Whallon 1979b	O55/1
111	Söğütlü	2.5	Höyük	0	1	1	1	1	0	0	1	Konya	Kulu	Omura 1994	92-27, 04-35
112	Killik Tepe (Şabanözü)	2.5	Höyük	0	0	1	0	1	0	0	1			Kealhofer 2005	5
113	Tatarhöyük	2.5	Höyük	1	1	0	0	1	0	0	1	Kırşehir	Boztepe	Omura 2002	01-52
114	Süleymanlı	2.5	Höyük	0	1	0	0	1	-	-	-	Akhisar		French 1969	26
115	Tokullu/Aşağıbağlar	2.4	Höyük	0	1	0	0	1	1	0	1	Çorum	Sungurlu	Sipahi & Yıldırım 2000	98-07
116	Mula Höyük	2.4	Höyük	1	1	0	0	1	0	0	1	Konya	Meram	Bahar 1999	116.19, 99-14
117	Eğribayat Höyük	2.4	Höyük	1	1	0	0	1	0	0	1	Konya	Selçuklu	Bahar 1999	113.01, 99-26
118	Kayı Höyük	2.4	Höyük	0	1	1	0	1	0	0	1	Konya	Meram	Bahar 1999	116.20, 99-04
119	Gavur Höyük	2.4	Höyük	0	0	0	0	1	0	0	0	Konya	Güneysınır	Bahar 2003	127.03, 03-05
120	İmikusağı Höyüğü	2.4	Höyük	0	1	1	0	1	1	1	1	Elâzığ	Baskil	Özdoğan 1977	O50/1
121	Tille Höyüğü	2.4	Höyük	1	1	1	0	1	0	0	1	Adıyaman	Kahta	Summers 1993	excavated
122	Hantepesi	2.4	Höyük	0	1	0	0	1	1	0	0	Çorum	Merkez	Sipahi & Yıldırım 2004	04-02
123	Akmescit Mevkii	2.4		0	1	1	0	1	0	0	0	Isparta	Gelendost	Özsait 2004b	293
124	Kuzlubucak	2.4	Höyük	0	1	1	0	1	0	0	0	Karaman		French 1965	3
125	Kayran Dere A	2.4	Slope	0	0	1	0	1	0	0	1			Kealhofer 2005	43
126	Küllü-1	2.4	Höyük	1	1	1	1	1	0	0	1	Kırşehir	Çiçekdağ	Omura 2002	01-43
127	İkitepe	2.3	Höyük	1	1	1	1	1	0	0	1	Kayseri	Develi	Omura 1992	90-29
128	Höyük Çalören	2.3	Höyük	1	1	1	1	1	0	0	1	Ankara	Şereflikoçhisar	Omura 1997	95-39, 03-46
129	Misko	2.3	Höyük	0	0	0	0	1	1	0	1	Konya	Cihabeyli	Omura 2000	98-64
130	Zivra Tepe	2.3	Höyük	0	1	0	0	1	0	1	1	Konya	Selçuklu	Omura 2001b	99-50
131	Kadı Höyük	2.3	Höyük	1	1	1	1	1	0	0	1	Kırşehir	Akçakent	Omura 1989	87-03, 01-42

ID	Site	ha	Type	CHA	EBA	MBA	MBA-LBA	LBA	OH	EP	IA	Province	District	Publication	Publ. Nr.
132	Şarampol Tepe	2.3	Kale	0	0	1	0	1	0	0	1	Konya	Ilgın	Bahar & Koçak 2004	106.07
133	Yazıkınık Höyük	2.3	Höyük	1	1	1	1	1	0	0	1	Kırşehir	Mucur	Omura 2002	01-78
134	Dumanlı 02 S05	2.3	Flat	0	0	1	1	1	1	0	0	Çankırı		Matthews	Dum. 02 S05
135	Tell al-Judaidah	2.3	Höyük	1	1	1	0	1	0	0	1	Amuq		Casana & Wilkinson 2005	AS176
136	Küçük Hüseyin Tepesi I	2.2	Höyük	1	1	1	1	1	0	0	1	Konya	Kulu	Omura 1995	93-19
137	Fatinhöyöğü	2.2	Höyük	0	1	0	0	1	0	1	0	Konya	Selçuklu	Omura 2001b	99-41
138	Yağlıören	2.1	Höyük	0	1	0	0	1	0	0	1	Ankara	Haymana	Omura 1994	92-29
139	Uso Höyük	2.1	Höyük	0	0	0	0	1	0	1	0	Konya	Kulu	Omura 2000	98-25
140	Höyük Cepni	2.1	Höyük	0	0	0	0	1	0	0	1	Kırşehir	Çiçekdağı	Omura 2002	01-31
141	Bayramhöyüğü	2	Höyük	0	1	1	1	1	0	0	1	Ankara	Haymana	Omura 1996a and b	94-09
142	Höyük Gölyazı	2	Höyük	0	0	0	0	1	0	0	0	Konya	Cihanbeyli	Omura 2001b	99-52
143	Ayvalpınar I	2	Höyük	1	1	1	0	1	0	1	0	Amasya	Göynücek	Özsait 1998a	45
144	Kahvepınar	2	Höyük	0	1	1	0	1	0	0	1	Sivas	Sarkişla	Ökse 2000b	98-24
145	Taşkun Kalesi	2	Höyük	0	1	0	0	1	0	0	0	Elâzığ	Merkez	Whallon 1979	N52/2
146	Mercin (Boz H.)	2	Höyük	0	0	0	0	1	0	0	1			Seton-Williams 1954	12
147	Acı Ağız (Hanyeri)	2	Höyük	0	1	1	1	1	0	0	0	Kırşehir	Akpınar	Omura 2002	01-10
148	Höyük Kıyıhalilinceli	1.9	Höyük	0	1	1	1	1	1	0	0	Kırıkkale	Sulakyurt	Omura 1993	91-02
149	Han	1.9	Höyük	0	1	1	1	1	0	0	0	Ankara	Şereflikoçhisar	Omura 1994	92-11
150	Kale Çimşit	1.9	Höyük	0	1	1	1	1	0	0	1	Ankara	Gölbaşı	Omura 1995	93-15
151	Kiliseören I	1.9	Höyük	0	0	1	1	1	0	0	1	Konya	Kulu	Omura 1995	93-35
152	İbşin (Suluhanlı I)	1.9	Höyük	0	1	1	1	1	0	0	1	Kırşehir	Merkez	Omura 1997	95-22, 02-006
153	Değirmen Tepe	1.9	Höyük	1	1	0	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	O54/3
154	Hanyeri Höyük	1.8	Höyük	0	1	1	1	1	1	0	0	Kırşehir	Kaman	Mikami & Omura 1988	86-22

ID	Site	ha	Type	CHA	EBA	MBA	MBA-LBA	LBA	OH	EP	IA	Province	District	Publication	Publ. Nr.
155	Köstengi 1	1.8	Höyük	0	1	1	0	0	0	0	1	Konya	Kulu	Omura 1994	92-26
156	Müşkü 1	1.8	Höyük	0	1	0	0	1	0	1	1	Konya	Selçuklu	Omura 2001b	99-60
157	Onhoroz Höyük	1.8	Höyük	0	1	1	0	1	1	0	1	Amasya	Merzifon	Özsait 1998a	166
158	Dökmetepe	1.8	Höyük	1	1	1	0	1	1	0	1	Tokat	Zile	Özsait 2000a	206
159	Han Tepesi	1.8	Höyük	1	1	1	0	1	0	0	1	Sivas	Merkez	Ökse 2001b	99-83-85
160	Çöğürlü (Mennik)	1.8	Höyük	0	1	1	0	1	0	0	0	Konya	Tuzlukçu	Bahar 1999	102.01, 99-42
161	Okçu Höyük	1.8	Höyük	0	0	1	0	1	0	0	0	Konya	Çumra	Bahar 2001	121.12, 99-10
162	Kaşoba Höyüğü	1.8	Höyük	0	0	1	0	1	0	0	1	Karaman	Merkez	Bahar 2001	201.12, 99-26
163	Taşkun Mevkii	1.8	Höyük	1	1	1	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	N52/1
164	Parmakören	1.8		0	1	0	0	1	0	0	0			Efe 1991	37
165	Tümükkale	1.8	Höyük	0	1	0	0	1	0	0	0		Silifke	French 1965	10
166	Kaleevci (Höyük)	1.8	Höyük	0	1	0	0	1	0	0	0	Kırşehir	Çiçekdag	Omura 2002	01-37
167	Tilki Deliği	1.8		1	0	0	0	1	0	0	1	Ankara	Sereflikoçhisar	Omura 2004	03-39
168	Yücek Höyük	1.8	Höyük	0	0	0	0	1	0	1	0	Çankırı	Korgun	Matthews	98.198
169	Bostanlı	1.7	Höyük	0	0	1	1	1	0	0	0	Yozgat	Boğazlıyan	Omura 1992	90-16
170	Yatan	1.7	Höyük	0	1	1	1	1	0	0	1	Yozgat	Boğazlıyan	Omura 1992	90-22
171	Paşatepesi	1.7	Höyük	0	1	1	1	1	0	0	1	Ankara	Polatlı	Omura 1996a and b	94-12
172	Moryokuş Höyük	1.7	Höyük	1	1	1	1	1	0	0	1	Ankara	Şereflikoçhisar	Omura 1997	95-38, 03-47
173	Höyük Yazıbelen	1.7	Höyük	0	1	0	0	1	0	1	0	Konya	Selçuklu	Omura 2001b	99-39
174	Kazancı	1.7	Höyük	1	1	0	0	1	0	0	0	Elâzığ	Merkez	Whallon 1979	O54/6
175	Körtepe	1.7	Höyük	1	1	1	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	O55/8-9
176	Göğ Höyük	1.7	Höyük	0	0	0	0	1	0	0	1	Kırşehir	Çiçekdağı	Omura 2002	01-25
177	Çatal	1.7	Höyük	0	1	0	0	1	0	0	0	Kırşehir	Çiçekdaı	Omura 2002	01-33
178	Asarlık, Eski Hisarlık	1.7	Hill	0	0	0	0	1	1	1	0	Çanakkale		Rüstem & Bieg 2003	07

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179	Höyük Yukarı Şıh	1.6	Höyük	0	1	0	0	1	0	0	1	Kırıkkale	Çelebi	Omura 1993	91-14, 02-068
180	Kültepe-Ikizce	1.6	Höyük	0	1	1	1	1	0	0	1	Ankara	Haymana	Omura 1996a and b	94-07
181	Höyük Oymaağaç	1.6	Höyük	1	1	1	1	1	0	0	0	Ankara	Beypazar	Omura 1996a and b	94-33
182	İrmelik Höyük	1.6	Höyük	1	1	1	0	1	0	0	0	Konya	Sarayönü	Bahar & Koçak 2004	108.09
183	Üyücek Tepe	1.6	Höyük	0	1	1	0	1	0	0	1	Elâzığ	Baskil	Özdoğan 1977	O50/5
184	Kavganın Höyük	1.6	Höyük	1	1	0	0	1	0	0	1	Konya	Ilgın	Bahar & Koçak 2004	106.17
185	Saraycık Höyük	1.6	Höyük	0	0	1	0	1	0	0	0	Konya	Ilgın	Bahar & Koçak 2004	106.21
186	Gubat	1.6	Höyük	0	0	0	0	1	0	0	1	Kırıkkale	Çelebi	Omura 2003	02-067
187	Çiftlik Tepe	1.6	Höyük	0	1	1	0	1	0	0	0	Çanakkale	Bayramiç	Rüstem & Bieg 2003	16
188	Asartepe	1.6	Höyük	1	1	1	1	1	1	1	0	Çanakkale		Rüstem & Bieg 2003	24
189	Boztepe	1.6	Höyük	0	1	1	0	1	0	0	1	Amuq		Casana & Wilkinson 2005	AS89
190	Ahmet Şahbaz Çiftliği	1.6		0	1	1	0	1	0	0	1	Amuq		Casana & Wilkinson 2005	AS231
191	Şahının Höyük	1.5	Höyük	0	1	1	1	1	0	0	1	Konya	Kulu	Omura 1994	92-37, 04-44
192	Kül-Karapınar	1.5	Höyük	1	0	1	1	1	0	0	1	Konya	Kulu	Omura 1994	92-13, 04-03
193	Halkavun	1.5	Höyük	0	1	1	1	1	0	0	1	Ankara	Kazan	Omura 1996b	94-19
194	Mezarlık Tepe	1.5	Höyük	0	1	1	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	O54/10
195	Asağı Şeyhacı Tepesi	1.5	Höyük	0	1	0	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	O55/10
196	Tepe	1.5	Höyük	1	1	1	1	1	0	0	1	Kırşehir	Çiçekdağı	Omura 2002	01-46
197	İnceboğaz Tepe	1.5	Flat	0	0	1	0	1	1	1	0	Çankırı	Eskipazar	Matthews	98.122
198	Kanlı Göl Mevkii	1.5	Flat	0	0	1	1	1	1	0	0	Çankırı	Korgun	Matthews	98.218
199	Küçük Hüseyin Tepesi 1	1.5	Höyük	1	0	0	0	1	0	0	1	Konya	Kulu	Omura 2005	04-39
200	Kuruhöyük	1.4	Höyük	0	0	1	1	1	0	0	1	Konya	Kulu	Omura 1994	92-16
201	Alıcık Höyük	1.4	Höyük	0	1	1	0	1	0	0	1	Amasya	Mezifon	Dönmez 2002	02-15 (73)
202	Delicik Tepe	1.4	Höyük	0	0	1	0	1	0	0	1	Amasya	Merzifon	Dönmez 2002	02-17 (75)

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203	Özlünün Höyüğü	1.4	Höyük	1	1	0	0	1	0	0	1	Kırşehir	Boztepe	Omura 2002	01-61
204	Salman Höyük West	1.4	Flat	0	0	1	1	1	1	1	0	Çankırı	Ilğaz	Matthews	97.016
205	Kalanuro Tepesi	1.4	Höyük	1	1	1	1	1	1	1	0	Çanakkale		Rüstem & Bieg 2003	25
206	Karaağaç Tepe	1.4	Höyük	1	1	1	1	1	1	1	0	Çanakkale		Rüstem & Bieg 2003	27
207	Beşarslan	1.4	Höyük	0	1	1	0	1	0	0	1			Casana & Wilkinson 2005	AS143
208	Çöpler Höyük	1.3	Höyük	1	1	1	1	1	0	0	1	Konya	Kulu	Omura 1994	92-23, 04-13
209	Höyük Yeniyapan	1.3	Höyük	0	0	1	0	1	0	1	1	Kırşehir		Mikami & Omura 1988	86-07
210	Kuruhöyük	1.3	Höyük	0	1	1	1	1	0	0	0	Kırşehir	Kaman	Mikami & Omura 1988	86-18
211	Dikilitaş	1.3	Höyük	0	1	1	1	1	0	0	1	Ankara	Haymana	Omura 1995	93-47
212	Höyük Çayırlı	1.3	Höyük	0	1	1	1	1	0	0	1	Ankara	Gölbaşı	Omura 1996a and b	94-04
213	Güdül Ağıl	1.3	Höyük	0	1	0	0	1	0	1	0	Konya	Cihanbeyli	Omura 2001b	99-09
214	Höyük Yelek	1.3	Höyük	0	1	0	0	1	0	1	0	Kırşehir	Kaman	Omura 2001a	00-23
215	Sevdiğin Höyük	1.3	Höyük	0	1	1	1	1	0	1	1	Kırşehir	Merkez	Omura 2001a	00-61
216	Çakıliçi Tepesi	1.3	Slope	0	1	0	0	1	0	0	0	Konya	Selçuklu	Bahar 2001	113.20, 01-40
217	Körtepe	1.3	Höyük	0	1	1	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	O55/4
218	Tatarhöyük	1.3	Höyük	1	1	1	0	1	0	0	1	Urfa	Bozova	Özdoğan 1977	U51/8
219	Höyüktepe (Zekere)	1.3	Höyük	0	1	1	1	1	0	0	1	Kırşehir	Boztepe	Omura 2002	01-56
220	Keltepe	1.2	Höyük	0	0	1	1	1	0	0	1	Ankara	Haymana	Omura 1994	92-30
221	Eski Mezarlık-Akarca	1.2	Höyük	0	1	1	1	1	0	0	1	Ankara	Şereflikoçhisar	Omura 1995	93-17
222	Höyük Yaylabağ	1.2	Höyük	0	1	1	1	1	0	0	1	Ankara	Gölbaşı	Omura 1995	93-26
223	Yuğ-Yukarıpınarbaşı	1.2	Höyük	0	0	1	1	1	0	1	0	Konya	Selçuklu	Omura 2001b	99-65
224	Höyük Hamit	1.2	Höyük	0	0	1	1	1	0	1	1	Kırşehir	Kaman	Omura 2001a	00-17
225	Köyük-Karakaya (Konya)	1.2	Höyük	0	0	0	0	1	0	1	1	Konya	Merkez	Omura 2001a	00-20
226	Karacaören I	1.2	Höyük	1	1	1	0	1	1	0	1	Amasya	Gümüşhaciköy	Özsait 1998a	37
227	Sinnelik Höyük	1.2	Höyük	0	1	1	0	1	1	0	0	Tokat	Zile	Özsait 2000a	227
228	Alacapınar Tepe	1.2	Höyük	0	1	1	0	1	0	0	1	Amasya	Merzifon	Dönmez 2002	02-16 (74)

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229	Dereağıl Tepesi	1.2	Höyük	1	1	0	0	1	0	0	0	Amasya	Suluova	Dönmez 2002	02-19
230	Yoğurtçubaba Tepesi	1.2	Höyük	1	1	1	0	1	0	0	1	Amasya	Suluova	Dönmez 2002	02-20 (33)
231	Ali Tepesi	1.2	Höyük	0	1	0	0	1	0	0	1	Konya	Karapınar	Bahar 2002a	122.03
232	Taşköprü	1.2	Höyük	0	1	0	0	1	0	0	0	Elâzığ	Merkez	Whallon 1979	O54/23
233	Domuz Tepe	1.2	Höyük	1	1	1	0	1	0	0	1			Seton-Williams 1954	74
234	Hacı Musa	1.2	Höyük	0	1	0	0	1	1	0	1	Çorum	Merkez	Sipahi & Yıldırım 2004	02-08
235	Çorak	1.2		1	1	1	1	1	0	0	1	Kırsehir	Çiçekdağı	Omura 2002	01-48
236	Gökhöyük	1.1	Höyük	0	1	1	1	1	0	0	1	Ankara	Bala	Omura 1995	93-01
237	Yaylahöyük	1.1	Höyük	0	0	1	1	1	0	0	1	Ankara	Haymana	Omura 1995	93-40
238	Özhöyük	1.1	Höyük	0	1	1	1	1	0	0	1	Ankara	Haymana	Omura 1995	93-41
239	Tekirköy	1.1	Höyük	I	1	0	0	1	0	0	0		Silifke	French 1965	9
241	Topsogutler/ Hamam Boğaz	1.1	Höyük	0	1	1	0	1	0	0	0			Kealhofer 2005	9
241	Mezarlrk-Deveci	1.1	Höyük	1	1	0	0	1	0	0	1	Kırşehir	Akpınar	Omura 2002	01-05
242	Veletözü Höyüğü	1.1	Höyük	1	1	1	1	1	0	0	0	Kırşehir	Çiçekdağı	Omura 2002	01-29
243	Külhüyük	1.1	Höyük	0	1	1	1	1	0	0	1	Kırşehir	Boztepe	Omura 2002	01-66
244	Kokarkuyu	1.1	Höyük	1	0	0	0	1	0	0	1	Amuq		Casana & Wilkinson 2005	AS161
245	Tell Ermeneia	1.1	Höyük	0	1	1	0	1	0	0	0	Amuq		Casana & Wilkinson 2005	AS173
246	Kemalağa Çiftliği	1.1	Höyük	0	1	1	0	1	0	0	0	Amuq		Casana & Wilkinson 2005	AS186
246	Kültepe	1	Höyük	1	1	1	1	1	0	0	1	Kırıkkale	Delice	Omura 1992	90-38
248	Höyük Fevziye	1	Höyük	0	1	1	1	1	0	0	1	Konya	Kulu	Omura 1994	92-17, 04-06
249	Tobe 1 (Seker I)	1	Höyük	1	1	1	1	1	0	0	1	Ankara	Şereflikoçhısar	Omura 1994	92-42, 03-55
250	Gence	1	Höyük	0	1	1	1	1	0	0	1	Ankara	Gölbaşı	Omura 1995	93-13
251	Höyük Kerpiç	1	Höyük	0	1	1	1	1	0	0	0	Ankara	Haymana	Omura 1995	93-37
252	Höyük Güvenç	1	Höyük	0	1	1	1	1	0	0	0	Ankara	Kazan	Omura 1996b	94-21
253	Höyük Güneyce	1	Höyük	0	1	1	1	1	0	0	1	Ankara	Gündül	Omura 1996ab	94-27

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254	Çavuşlu	1	Höyük	0	1	1	1	1	0	0	1	Kırsehir	Merkez	Omura 1997	95-01, 02-001
255	Eşmebaşı Kalesi	1	Kale	0	0	0	0	1	0	0	1	Sivas	Şarkışla	Ökse 1999	97-91
256	Yarık Tepe	1	Höyük	1	1	0	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	O54/11
257	Körtepe	1	Höyük	0	1	1	0	1	0	0	0	Elâzığ	Merkez	Whallon 1979	O54/25
258	Gritille	1	Höyük	1	1	1	0	1	0	0	1	Adıyaman	Şamsat	Özdoğan 1977	T51/9
259	Kollar Tepe	1	Ridge	0	0	1	0	1	0	0	1			Kealhofer 2005	3
260	Havanın Oluğu	1	Höyük	0	1	0	0	1	0	0	0	Kırşehir	Merkez	Omura 2002	01-07
261	Höyük Harmanaltı	1	Höyük	0	0	1	1	1	0	0	1	Kırşehir	Boztepe	Omura 2002	01-30
262	Salur Höyük	1	Höyük	0	0	1	1	1	1	1	0	Çankırı	Orta	Matthews	97.50
263	Kara Mustafa Höyük	1	Höyük	0	0	0	0	1	1	1	0	Çankırı	Merkez	Matthews	98.169
264	İnandik Tepe	1	Höyük	0	0	1	1	1	1	1	0	Çankırı	Merkez	Matthews	98.17
265	Külburun Höyük	1	Höyük	0	0	0	0	1	1	1	0	Çankırı	Merkez	Matthews	98.171
266	Mart 01 S01	1	Höyük	0	0	1	1	1	1	1	0	Çankırı		Matthews	Mart 01 S01
267	Tell Baytarlı	1	Höyük	0	1	1	0	1	0	0	1	Amuq		Casana & Wilkinson 2005	AS40
268	Tell Bahlılah	1	Höyük	0	1	1	0	1?	0	0	0	Amuq		Casana & Wilkinson 2005	AS133
269	Gürücük	0.9	Höyük	1	1	1	1	1	0	0	1	Konya	Kulu	Omura 1994	92-18, 04-02
270	Bağyeri	0.9	Höyük	0	1	1	1	1	0	0	1	Ankara	Gölbaşı	Omura 1995	93-27
271	Höyük Taşpınar	0.9	Höyük	0	1	1	1	1	0	0	1	Ankara	Gölbaşı	Omura 1996b	94-44
272	Çayırlık	0.9	Höyük	0	1	1	1	1	0	0	1	Aksaray	Ortaköy	Omura 1997	95-19
273	Mezarlık Tepe	0.9	Höyük	0	1	0	0	1	0	1	1	Konya	Cihanbeyli	Omura 2001b	99-33
274	Aşvan Kalesi	0.9	Höyük	0	1	1	0	1	0	0	0	Elâzığ	Merkez	Whallon 1979	N52/4
275	İviktepe	0.9	Höyük	1	1	0	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	N52/11
276	Maşatlık (Sarpulu)	0.9	Höyük	0	0	0	0	1	0	0	0	Elâzığ	Merkez	Whallon 1979	O54/5
277	Şavka Tepe	0.9	Höyük	1	1	1	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	O54/24
278	Körtepe	0.9	Höyük	0	1	1	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	O54/28

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279	Kaynakobası	0.9		0	1	0	0	1	0	0	0	Alpu		Efe 1996	163
280	Samıt Höyük	0.9	Höyük	0	1	1	0	1	0	0	1	Konya	Kadınhanı	Bahar & Koçak 2004	107.02
281	Çukur Argaç (Attepe)	0.9	Höyük	1	1	0	0	1	0	0	1	Kırşehir	Çiçekdağı	Omura 2002	01-28
282	Höyük Küçük Teflek	0.9	Höyük	0	0	0	0	1	0	0	1	Kırşehir	Çiçekdağı	Omura 2002	01-32
283	Mudanlar Pınarı/Altılar	0.8	Höyük	0	1	1	1	1	0	0	1	Konya	Kulu	Omura 1994	92-24, 04-01
284	Höyük Bahçehisar	0.8	Höyük	1	1	1	1	1	0	0	1	Konya	Kulu	Omura 1994	92-20, 04-11
285	Nafinin Höyüğü /Tepeköy H.	0.8	Höyük	0	1	0	0	1	0	1	1	Kırşehir	Kaman	Mikami & Omura 1988	86-10, 00-27
286	İğdecik	0.8	Höyük	0	1	1	1	1	0	0	0	Yozgat	Boğazlıyan	Omura 1992	90-19
287	Yayla Höyük	0.8	Höyük	1	0	1	1	1	0	0	1	Ankara	Şereflikoçhisar	Omura 1993	91-25, 03-18
288	Demirhavan	0.8	Höyük	0	1	1	1	1	0	0	1	Ankara	Haymana	Omura 1994	92-40
289	Örenli Mevkii	0.8	Höyük	0	0	1	1	1	0	0	0	Ankara	Kulu	Omura 1995	93-32
290	Gökçe	0.8	Höyük	0	1	0	0	1	0	0	1	Ankara	Gölbaşı	Omura 1996a and b	94-03
291	Höyük Hacılar	0.8	Höyük	0	1	1	1	1	0	0	1	Ankara	Gölbaşı	Omura 1996a and b	94-06
292	Höyük Dikmen	0.8	Höyük	0	1	1	1	1	0	0	1	Ankara	Beypazarı	Omura 1996a and b	94-29
293	Emir Ören	0.8	Höyük	0	0	0	0	1	1	0	1	Konya	Cihanbeyli	Omura 2000	98-70
294	Karatepe	0.8	Höyük	0	1	0	0	1	0	1	1	Konya	Altınekin	Omura 2001b	99-37
295	Aliağa Pınarı	0.8	Höyük	1	1	1	0	1	1	0	0	Amasya	Merzifon	Özsait 2000a	167
296	Akdoğan-Kale Tepe	0.8	Höyük	1	1	1	0	1	1	1	1	Tokat	Zile	Özsait 2000a	214
297	Pamukçu Höyük	0.8	Höyük	0	1	1	0	1	0	0	1	Konya	Meram	Bahar 1999	116.23, 99-02
298	Güdelesin Höyük	0.8	Höyük	0	1	1	0	1	0	0	1	Konya	Güneysınır	Bahar 2003	127.02, 03-06
299	No Name	0.8	Höyük	1	1	1	0	1	0	0	0	Elaziğ	Merkez	Whallon 1979	N52/10
300	Kuruçayır Tepesi	0.8	Höyük	1	1	1	0	1	0	0	1	Elaziğ	Merkez	Whallon 1979	O54/12
301	Körpınar	0.8	Surface	0	1	0	0	1	0	0	0	Elaziğ	Merkez	Whallon 1979	O54/18

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302	Kadıoturan Tepesi	0.8	Höyük	0	0	0	0	1	0	0	1	Malatya	Merkez	Özdoğan 1977	O50/18
303	Subak	0.8		0	0	0	0	1	0	0	0			Efe 1994	103
304	Tenevardi I	0.8	Höyük	1	1	1	0	1	0	0	1			Seton-Williams 1954	115
305	Çingantepe	0.8	Höyük	0	1	1	0	1	0	0	0		Mut	French 1965	2
306	Höyük İnziloğlu	0.8	Höyük	1	1	0	0	1	0	0	1	Kırsehir	Keskin	Omura 2002	01-08
307	Karakir	0.8	Höyük	1	1	0	0	1	0	0	1	Kırsehir	Çiçekdağı	Omura 2002	01-01
308	Tepe Ardı	0.8	Höyük	0	0	1	1	1	1	1	0	Çankırı	Ilğaz	Matthews	97-013
309	Çapar Höyük	0.8	Höyük	0	0	0	0	1	1	1?	0	Çankırı	Merkez	Matthews	98.156
310	Başçoban Höyük	0.8	Höyük	0	0	1	0	1	1	0	0	Çankırı	Merkez	Matthews	98.162
311	Höyük Tepesi	0.8	Höyük	0	0	1	0	1	1	0	0	Çankırı	Eldivan	Matthews	98.178
312	Pamucu I and II	0.8	Höyük	1	1	0	0	1	-	-	-	Balıkesir		French 1969	11
313	Sındrıgı	0.8	Höyük	0	1	0	0	1	-	-	-	Sındrıgı		French 1969	15
314	Mecidiye	0.8	Höyük	1	1	0	0	1	-	-	-	Akhisar		French 1969	21
315	Eğriköy	0.8	Höyük	0	1	0	0	1	-	-	-	Manisa		French 1969	33
316	Zelihan	0.7	Höyük	0	1	1	1	1	0	0	1	Ankara	Haymana	Omura 1995	93-48
317	Höyük Müslüm	0.7	Höyük	0	1	1	1	1	0	0	1	Ankara	Polatlı	Omura 1996a and b	94-34
318	Değirmen	0.7	Höyük	0	1	1	1	1	0	0	1	Aksaray	Ortaköy	Omura 1997	95-18
319	Höyük Seçilmiş	0.7	Höyük	0	1	0	0	1	0	1	0	Konya	Cihanbeyli	Omura 2001b	99-32
320	Küçükkastepe	0.7	Höyük	0	1	0	0	1	0	1	1	Konya	Altinekin	Omura 2001b	99-38
321	Koçköprü Kalesi	0.7	Höyük	0	1	1	0	1	0	0	0	Sivas	Kangal	Ökse 1995	93-31
322	Gök H. II - Konurkale	0.7	Höyük	0	1	0	0	1	0	0	1	Kırsehir	Çiçekdağı	Omura 1989	87-06, 01-40
323	Gülüşanbaba Tepesi	0.7	Höyük	1	1	1	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	O54/27
324	Köprübaşı Höyüğü	0.7		0	1	0	0	1	0	0	0	Alpu		Efe 1996	159
325	Kümbet Kocabahçe	0.7	Höyük	0	0	0	0	1	0	0	0	Çanakkale		Rüstem & Bieg 2003	18
326	Sulu	0.6	Höyük	0	0	1	1	1	0	0	1	Aksaray	Ortaköy	Omura 1992	90-48, 95-03

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327	Semizbağ Höyük	0.6	Höyük	0	1	0	0	1	0	0	1	Ankara	Evren	Omura 1993	91-29, 03-17
328	Döğmekale	0.6	Höyük	0	1	1	1	1	0	0	1	Ankara	Kazan	Omura 1996a and b	94-20
329	Kültü Höyük	0.6	Höyük	0	0	0	0	1	0	1	0	Konya	Cihanbeyli	Omura 2000	98-69
330	Höyük Kuyulsebil	0.6	Höyük	0	0	0	0	1	0	1	0	Konya	Saraönü	Omura 2001b	99-29
331	Viran Camii	0.6	Höyük	1	1	0	0	1	1	0	1	Tokat	Zile	Özsait 2000a	207
332	Çivril Tepesi	0.6	Höyük	0	1	1	0	1	1	1	1	Sivas	Sarkisla	Ökse 1999	97-88
333	Kümbet Tepe (Alevi Tepe)	0.6	Höyük	0	1	1	0	1	0	1	1	Amasya	Suluova	Dönmez 2002	02-18 (77)
334	İmircik Höyük	0.6	Höyük	1	1	0	0	1	0	0	1	Konya	Kadınhanı	Bahar 1997	107.06
335	No Name	0.6	Höyük	0	0	1	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	O54/9
336	Boy Tepe	0.6	Höyük	1	1	1	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	O55/3
337	Hırbik Mevkii	0.6	flat site	1	0	0	0	1	0	0	1	Adıyaman	Kahta	Özdoğan 1977	T52/21
338	Mahmuthisarı Höyük	0.6	Höyük	1	1	0	0	1	0	0	1	Konya	Ilgın	Bahar & Koçak 2004	106.04
339	Maltepe / Kilisetpe	0.6	Höyük	0	1	1	0	1	0	0	0			Postgate in print	excavated
340	Beylikköprü East A	0.6	Höyük	0	1	1	0	1	0	0	0			Kealhofer 2005	6
341	Cevizli (Cevizlibağ)	0.6	Höyük	1	1	0	0	1	0	0	1	Kırşehir	Boztepe	Omura 2002	01-59
342	Salman Höyük East	0.6	Höyük	0	0	1	1	1	1	0	0	Çankırı	Ilğaz	Matthews	97.015
343	Akırbey Çiftlik	0.6	Höyük	0	1	0	0	1	-	-	-	Akhisar		French 1969	17
344	Kennez I	0.6	Höyük	0	1	0	0	1	-	-	-	Akhisar		French 1969	19
345	Paşaköy-Manisa	0.6	Höyük	0	1	0	0	1	-	-	-	Manisa		French 1969	39
346	Svrantepe	0.6	Höyük	0	0	0	0	1	0	0	0	Çanakkale		Rüstem & Bieg 2003	13
347	Eskideğirmen Tepe	0.6	Höyük	0	0	1	0	1	0	0	1	Amuq		Casana & Wilkinson 2005	AS214
348	Tek Höyük	0.5	Höyük	0	1	1	1	1	0	0	0	Kırşehir	Kaman	Mikami & Omura 1988	86-21, 00-47
349	Tobe 2 (Seker II)	0.5	Höyük	0	0	0	0	1	0	0	0	Ankara	Şereflikoçhisar	Omura 1994	92-43, 03-56
350	Gökyük	0.5	Höyük	0	1	1	1	1	0	0	0	Ankara	Haymana	Omura 1995	93-42
351	Datçabelen	0.5	Höyük	0	0	1	1	1	0	1	1	Ankara	Ayaş	Omura 1996a and b	94-15

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352	Höyük Ortabereketli	0.5	Höyük	0	1	1	1	1	0	0	1	Ankara	Ayas	Omura 1996b	94-22
353	Yağlı	0.5	Höyük	0	1	1	1	1	0	0	1	Aksaray	Ağaçören	Omura 1997	95-21
354	Böyük Küllük Tepe	0.5	Höyük	0	1	1	0	1	1	0	0	Amasya	Merzifon	Özsait 1998	173
355	Kayapınarı Tepesi	0.5	Höyük	0	1	1	0	1	1	0	1	Tokat	Zile	Özsait 2000a	215
356	Samadolu Höyüğü	0.5	Höyük	0	1	1	0	1	0	0	1	Amasya	Merzifon	Dönmez 2002	02-14 (72)
357	Top Tepe	0.5	Höyük	0	1	0	0	1	1	0	1	Çorum		Sipahi & Yıldırım 1999	97-01
358	Kültepe (2)	0.5	Höyük	0	1	0	0	1	1	0	0	Çorum	Ugurludağ	Sipahi & Yıldırım 2000	98-09
359	Hanibrahimşah (Esenkent)	0.5	Höyük	1	1	0	0	1	0	0	0	Elâzığ	Merkez	Whallon 1979	N53/3
360	Çakıltepe (Körtepe)	0.5	Höyük	1	1	0	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	O54/15
361	Hayyım Tepe	0.5	Höyük	0	1	1	0	1	0	0	1	Malatya	Merkez	Özdoğan 1977	O50/23
362	Alikan Mevkii	0.5	flat site	0	0	0	0	1	0	0	1	Adıyaman	Samsat	Özdoğan 1977	T51/10
363	Yeniköy	0.5	Höyük	0	0	0	0	1	0	0	1	Adıyaman	Merkez	Özdoğan 1977	T50/20
364	Tatarlı Hüyügü	0.5	Höyük	1	0	0	0	1	0	0	1			Seton-Williams 1954	39
365	Tarmıl Höyük	0.5	Höyük	1	1	1	0	1	0	0	1			Seton-Williams 1954	50
366	Kültepe	0.5	Höyük	0	0	1	1	1	1	1?	0	Çankırı	Kızılırmak	Matthews	98.176
367	Çivi 05 S01	0.5	Höyük	0	0	1	0	1	1	0	0	Çankırı		Matthews	Çivi 05 S01
368	Üçpınar	0.5	Höyük	1	1	0	0	1	-	-	-	Balıkesir		French 1969	14
369	Bozhöyük	0.5	Höyük	0	1	1	0	1	0	0	0	Amuq		Casana & Wilkinson 2005	AS4
370	Taşlık	0.4	Höyük	0	1	1	1	1	0	1	1	Kırşehir	Kaman	Mikami & Omura 1988	86-19, 00-50
371	Küçük Tepe	0.4	Höyük	0	0	1	1	1	0	0	0	Ankara	Haymana	Omura 1995	93-31
372	Türkoğlu Çiftliği	0.4	Höyük	0	0	1	1	1	0	0	1	Ankara	Polatlı	Omura 1996b	94-13
373	Sivri Tepe	0.4	Höyük	0	1	1	0	1	0	0	1	Samsun	Havza	Özsait 2003a	267
374	Çay Boyu	0.4	Höyük	1	1	1	0	1	0	0	0	Elâzığ	Merkez	Whallon 1979	N52/9
375	Körtepe	0.4	Höyük	1	1	1	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	O54/14
376	Kemaksı Mevkii Maşatlık	0.4	Höyük	0	1	1	0	1	0	0	0	Elâzığ	Merkez	Whallon 1979	O54/21
377	Bahçeler Mevkii Körtepe	0.4	Höyük	1	0	0	0	1	0	0	0	Elâzığ	Merkez	Whallon 1979	O54/22

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378	Maşatlık	0.4	Höyük	0	1	1	0	1	0	0	0	Elâzığ	Merkez	Whallon 1979	O54/26
379	Karaağaç	0.4	Höyük	0	0	0	0	1	0	0	0			Seton-Williams 1954	4
380	Boğaz	0.4	Höyük	0	1	0	0	1	1	0	1	Çorum	Merkez	Sipahi & Yıldırım 2004	02-06
381	Eldeş Höyük (Nodalar H.)	0.4	Höyük	1	1	0	0	1	0	0	1	Konya	Ilgın	Bahar & Koçak 2004	106.03
382	Osmancık Höyük	0.4	Höyük	1	1	0	0	1	0	0	0	Konya	Kadınhanı	Bahar & Koçak 2004	107.03
383	Tekeliler	0.4	Höyük	0	1	0	0	1	-	-	-	Manisa		French 1969	42
384	Halak Tepe	0.4	Höyük	0	1	1	0	1	0	0	1	Amuq		Casana & Wilkinson 2005	AS134
385	Mezarlık-Yukarı Hacıbekir	0.3	Höyük	0	1	1	1	1	0	0	0	Ankara	Bala	Omura 1995	93-03
386	Höyük Uludere	0.3	Höyük	0	1	1	1	1	0	0	0	Ankara	Polatlı	Omura 1996b	94-24
387	Şahan Çeşmesi	0.3	Höyük	0	0	0	0	1	1	0	1	Kırşehir	Kaman	Omura 2001a	00-29
388	Kale Tepesi	0.3	Höyük	0	0	1	0	1	1	1	1	Sivas	Merkez	Ökse 2000b	98-09
389	Altıntepe	0.3	Höyük	1	1	1	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	O55/2
390	Harabe Tepe	0.3	Höyük	0	1	1	0	1	0	0	0	Malatya	Merkez	Özdoğan 1977	P50/11
391	Elvan Çelebi	0.3	Höyük	0	1	0	0	1	1	0	1	Çorum	Merkez	Sipahi & Yıldırım 2004	02-12
392	Sarıgazel Höyük	0.3	Höyük	1	1	0	0	1	0	1	1	Samsun	Ladik	Özsait 2004a	04-24
393	Gök Höyük	0.3	Höyük	0	0	0	0	1	0	0	1	Kırşehir	Çiçekdağı	Omura 2002	01-24
394	Küllü-2	0.3	Höyük	1	1	1	1	1	0	0	1	Kırşehir	Çiçekdağı	Omura 2002	01-44
395	Büyük Höyük (Solakuşağı)	0.3	Höyük	0	1	1	1	1	0	0	1	Ankara	Evren	Omura 2004	03-14
396	Kayışlar	0.3	Höyük	1	1	0	0	1	-	-	-	Akhisar		French 1969	01-04
397	Sekizevler	0.3	Höyük	0	0	1	0	1	0	0	0	Amuq		Casana & Wilkinson 2005	AS215
398	Kötü	0.2	Höyük	0	1	1	1	1	0	0	0	Aksaray	Ortaköy	Omura 1992	90-47
399	Bağtepe 1	0.2	Höyük	0	0	0	0	1	0	0	1	Konya	Cihanbeyli	Omura 2001b	99-11
400	Arzadeyin	0.2	Höyük	0	1	0	0	1	1	0	1	Kırşehir	Merkez	Omura 2001a	00-59
401	No Name	0.2	Höyük	0	1	1	0	1	0	0	0	Elâzığ	Merkez	Whallon 1979	N53/1

ID	Site	ha	Type	CHA	EBA	MBA	MBA-LBA	LBA	OH	EP	IA	Province	District	Publication	Publ. Nr.
402	Maltepe	0.2	Höyük	0	1	1		1	0	0	1	Elâzığ	Baskil	Özdoğan 1977	O50/13
403	Köstütepesi	0.2		0	1	0	0	1	0	0	0			Efe 1997	207
404	Kazanlı	0.2	Höyük	0	1	1	0	1	0	0	1			Seton-Williams 1954	78
405	Beyliköprü	0.2	Höyük?	0	1	1	0	1	0	0	0			Kealhofer 2005	16
406	Dolap	0.2	Höyük	0	0	1	1	1	0	0	0	Kırşehir	Merkez	Omura 2003	02-17
407	Celayır Höyük 2	0.2	Höyük	1	1	0	0	1	0	0	1	Ankara	Sereflikoçhisar	Omura 2004	03-33
408	Turbe Mevkii	0.2	Cemetery	0	0	0	0	1	1	0	0	Çankırı	Iğaz	Matthews	97.005
419	Karayusuf	0.1	Höyük	0	1	1	1	1	0	0	1	Nevşehir	Avanos	Omura 1992	90-35
410	Kuru Höyük	0.1	Höyük	0	1	1	1	1	0	0	1	Ankara	Bala	Omura 1992	90-51, 03-01
411	Halep Köprüsü Höyüğü	0.1	Höyük	0	0	0	0	1	0	0	0	Sivas	Kangal	Ökse 1995	93-23
412	Kel Osman Ağılı H.	0.1	Höyük	0	0	0	0	1	0	0	0	Sivas	Kangal	Ökse 1995	93-27
413	Eflatun Höyük	0.1	Höyük	1	1	1	0	1	0	0	1	Konya	Beysehir	Bahar 2001	115.01, 47
414	No Name	0.1	Höyük	0	1	1	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	O54/19
415	No Name	0.1	Surface	0	1	0	0	1	0	0	0	Elâzığ	Merkez	Whallon 1979	O55/6
416	Kırasa Tepesi	0.1	Höyük	0	1	1	0	1	0	0	1	Elâzığ	Baskil	Özdoğan 1977	P51/1
417	Tirmil Tepe	0.1	Höyük	1	1	1	0	1	0	0	1			Seton-Williams 1954	19
418	Tepesindelik	0.1	Höyük	0	1	0	0	1	0	0	0			Seton-Williams 1954	34
419	Kızılca Tepesi	0.1	Höyük	0	0	1	0	1	1	0	0	Çankırı	Kursunlu	Matthews	97.052
420	Tell Wuzwuze	0.1	Höyük	0	0	0	0	1	0	0	1	Amuq		Casana & Wilkinson 2005	AS221
421	Akpınar Kale	0.03	Flat	0	0	1	1	1	1	0	0	Çankiri	Orta	Matthews	97.033a
422	Eldivan 04 S01	0.01	Outlook	0	0	0	0	1	1	0	0	Çankırı		Matthews	
423	Yeşilhisar			0	1	1	1	1	0	0	1	Yozgat	Boğazliyan	Omura 1992	90-23

ID	Site	ha	Type	CHA	EBA	MBA	MBA-LBA	LBA	OH	EP	IA	Province	District	Publication	Publ. Nr.
424	Çayırlık		Höyük	1	1	1	1	1	0	0	1	Yozgat	Boğazlıyan	Omura 1992	90-26
425	Beşiktepe		Höyük	0	0	1	1	1	0	0	0	Kırıkkale	Delice	Omura 1992	90-39
426	Mezarlık-Güzelyayla		Höyük	0	1	1	1	1	0	0	0	Konya	Kulu	Omura 1995	93-39
427	Asarcık		Höyük	0	1	1	1	1	0	0	1	Ankara	Ayaş	Omura 1996b	94-25
428	Ersele		Höyük	0	1	0	0	1	0	0	0	Aksaray	Ortaköy	Omura 1998	96-01
429	Yassı		Höyük	0	0	1	1	1	0	1	0	Aksaray	Merkez	Omura 1998	96-03
430	Dede		Höyük	0	1	0	0	1	0	0	0	Aksaray	Merkez	Omura 1998	96-04
431	Karahöyük		Höyük	0	0	1	1	1	0	0	0	Aksaray	Merkez	Omura 1998	96-12
432	Kültepe		Höyük	0	0	1	1	1	0	0	0	Aksaray	Gülağaç	Omura 1998	96-29
433	Altıntas		Höyük	0	0	0	0	1	0	0	0	Aksaray		Omura 1998	96-33
434	Sulutepe		Höyük	0	0	0	0	1	0	0	0	Aksaray		Omura 1998	96-35
435	Höyük Taşlıyer		Höyük	0	0	0	0	1	0	1	0	Aksaray		Omura 1998	96-39
346	Höyük Topakkaya		Höyük	0	0	0	0	1	0	0	0	Aksaray		Omura 1998	96-43
437	Sungurlu		Höyük	0	0	0	0	1	0	0	0	Ankara		Omura 1998	96-45
438	Han Höyük		Höyük	0	0	1	1	1	0	0	0	Ankara		Omura 1998	96-48
439	Höyük Çimeli		Höyük	0	1	0	0	1	0	0	0	Aksaray		Omura 1998	96-37
440	Kale Tepe		Höyük	1	1	1	0	1	1	0	1	Amasya	Gümüshacihköy	Özsait 1998a	42
441	Küçük Küllük Tepe		Höyük	0	1	1	0	1	1	0	1	Amasya	Merzifon	Özsait 1998a	174
442	Tek Höyük Tepesi		Höyük	0	1	1	0	1	0	0	0	Sivas	Yıldızeli	Ökse 1994	92-02
443	Külhöyük		Höyük	0	1	1	0	1	0	0	0	Sivas	Sarkisla	Ökse 1994	92-05
444	Yeniçubuk Höyüğü		Höyük	0	1	1	0	1	0	0	1	Sivas	Sarkisla	Ökse 1994	92-08
445	Hanlı Höyügü		Höyük	0	1	1	0	1	0	0	1	Sivas	Merkez	Ökse 1994	92-10

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446	Höyük Tepesi		Höyük	0	1	1	0	1	0	0	0	Sivas	Merkez	Ökse 1994	92-13
447	Karağanlık Höyüğü		Höyük	0	1	0	0	1	0	0	0	Sivas	Merkez	Ökse 1994	92-15
448	Kayaönü/Mağra Tepesi		Höyük	0	1	0	0	1	0	0	0	Sivas	Merkez	Ökse 1994	92-19
449	Karayün Höyüğü		Höyük	0	1	1	0	1	0	0	1	Sivas	Merkez	Ökse 1994	92-20
450	Ağılkaya Höyüğü		Höyük	1	0	0	0	1	0	0	0	Sivas	Merkez	Ökse 1994	92-21
451	Kültepe Höyüğü		Höyük	1	0	0	0	1	0	0	0	Sivas	Zara	Ökse 1994	92-24
452	Laafçılar Ağılı Höyüğü		Höyük	0	1	0	0	1	0	0	0	Sivas	Zara	Ökse 1994	92-25
453	Kırkpınar Mezrası		Höyük	0	1	0	0	1	0	0	0	Sivas	Kangal	Ökse 1994	92-27
454	Siçan Höyük		Höyük	0	1	1	0	1	0	0	1	Sivas	Kangal	Ökse 1994	92-28
455	Höyük Değirmeni		Höyük	0	1	1	0	1	0	0	1	Sivas	Kangal	Ökse 1994	92-29
456	Başören Höyüğü		Höyük	0	1	0	0	1	0	0	1	Sivas	Altınyayla	Ökse 1995	93-03
457	Toprakkale Tepesi		Höyük	0	1	0	0	1	0	0	0	Sivas	Altınyayla	Ökse 1995	93-04
458	Harmandalı 1 Höyüğü		Höyük	0	0	0	0	1	0	0	1	Sivas	Altınyayla	Ökse 1995	93-05
459	Korudere (Kolluca H.)		Höyük	0	1	0	0	1	0	0	0	Sivas	Merkez	Ökse 1995	93-10
460	Taşlıdere Kalesi		Kale	0	0	0	0	1	0	0	1	Sivas	Merkez	Ökse 1995	93-11
461	Apa		Höyük	0	0	0	0	1	0	0	0	Sivas	Merkez	Ökse 1995	93-12
462	İviktepe Höyüğü		Höyük	0	1	1	0	1	0	0	0	Sivas	Merkez	Ökse 1995	93-13
463	Karaşar Kalesi		Flat	0	1	0	0	1	0	0	0	Sivas	Ulaş	Ökse 1995	93-17
464	Yeniaslan Tepesi		Höyük	0	0	0	0	1	0	0	0	Sivas	Koyulhisar	Ökse 1995	93-20
465	Kaladağı		Höyük	0	1	0	0	1	0	0	0	Sivas	Koyulhisar	Ökse 1995	93-21
466	Büyük Tilki Höyük		Höyük	0	0	0	0	1	0	0	0	Sivas	Kangal	Ökse 1995	93-24
467	Küçük Tilki Höyük		Höyük	0	1	1	0	1	0	0	0	Sivas	Kangal	Ökse 1995	93-25
468	Çetinkaya / Bulak		Höyük	0	0	0	0	1	0	0	0	Sivas	Kangal	Ökse 1995	93-32
469	Büyük Lüğlük H.		Höyük	0	1	0	0	1	0	0	0	Sivas	Kangal	Ökse 1995	93-33

ID	Site	ha	Type	CHA	EBA	MBA	MBA-LBA	LBA	OH	EP	IA	Province	District	Publication	Publ. Nr.
470	Davulhöyük		Höyük	0	1	1	0	1	0	0	0	Sivas	Gürün	Ökse 1995	93-37
471	Yılanhöyük		Höyük	0	1	0	0	1	0	0	0	Sivas	Gürün	Ökse 1995	93-38
472	Göbekören			0	0	1	0	1	0	0	1	Sivas	Gürün	Ökse 1995	93-44
473	Beypınar Kalesi			0	0	0	0	1	0	0	0	Sivas	Gürün	Ökse 1995	93-45
474	Kaleliyurt Kalesi			0	0	0	0	1	0	0	1	Sivas	Gürün	Ökse 1995	93-47
475	Hamazaşeyh		Höyük	0	1	1	0	1	0	0	1	Sivas	Yıldızeli	Ökse 1996	94-35
476	Tekke		Höyük	0	1	1	0	1	0	0	1	Sivas	Zara	Ökse 1997	95-29
477	Un Tepesi		Höyük	0	0	1	0	1	1	1	1	Sivas	Yıldızeli	Ökse 1999	97-14
478	Öksüz Tepe		Höyük	1	1	1	0	1	1	1	0	Sivas	Yıldızeli	Ökse 1999	97-42
479	Tuloğlu Tepesi		Höyük	0	1	1	0	1	0	0	1	Sivas	Yıldızeli	Ökse 1999	97-70
480	Demirboğa (Sevket T.)		Höyük	0	0	1	0	1	0	0	1	Sivas	Şarkışla	Ökse 2000b	98-59
481	Pınarpaşı Mevkii			1	0	0	0	1	0	1	0	Sivas	Şarkışla	Ökse 2001b	99-02
482	Yörüklü/Hüseindede		Höyük	0	1	0	0	1	1	0	0	Çorum	Sungurlu	Sipahi & Yıldırım 1999	97-07
483	Boyalı Höyük		Höyük	0	1	0	0	1	1	0	1	Çorum	Sungurlu	Sipahi & Yıldırım 1999	97-08
484	Fatmaören Höyük		Höyük	0	0	0	0	1	1	0	0	Çorum	Sungurlu	Sipahi & Yıldırım 2001	99-03
485	Salur Höyük (Yük Tepe)		Höyük	0	1	1	0	1	0	0	1	Samsun	Ladik	Özsait 2003a	33
486	Eski Kaleköy Höyük		Höyük	1	1	0	0	1	0	0	0	Konya	Ilgın	Bahar 1997	106.23
487	Kurşunlu Kale		Höyük	0	1	1	0	1	0	0	1	Konya	Sarayönü	Bahar & Koçak 2004	108.15
488	Obanın Höyük		Höyük	1	1	0	0	1	0	0	0	Konya	Selçuklu	Bahar 2001	113.27, 01-45
499	Hacıpoğlu Höyük		Höyük	1	1	1	0	1?	0	0	1	Kilis		Özgen et al. 2003	72
490	Yeşiloba Höyügü		Höyük	1	1	1	0	1?	0	0	1	Kilis		Özgen et al. 2003	79
491	Hennis Pınar Höyüğü		Höyük	0	1	1	0	1	0	0	1	Kilis		Özgen et al. 2003	80
492	Belentepe		Höyük	0	1	1	0	1?	0	0	1	Kilis		Özgen et al. 2003	86
493	Musabeyili Höyüğü		Höyük	0	1	1	0	1	0	0	1	Kilis		Özgen et al. 2003	90

ID	Site	ha	Type	CHA	EBA	MBA	MBA-LBA	LBA	OH	EP	IA	Province	District	Publication	Publ. Nr.
494	Zengül Höyük		Höyük	1	1	1	0	1	0	0	1	Kilis		Özgen et al. 2003	97
495	Akpınar Höyük		Höyük	1	1	1	0	1?	0	0	1	Kilis		Özgen et al. 2002	1
496	Akkabir Mevkii		Hill-top	0	1	1	0	1?	0	0	0	Kilis		Özgen et al. 2002	7
497	Çerçik Höyüğü		Höyük	0	1	1	0	1?	0	0	0	Kilis		Özgen et al. 2002	9
498	Sinnep Höyük North		Höyük	1	1	1	0	1	0	0	1	Kilis		Özgen et al. 2002	13
499	Til Habeş		Höyük	0	1	1	0	1?	0	0	1	Kilis		Özgen et al. 2002	14
500	Çatalhöyük East		Höyük	0	1	0	0	1?	0	0	1	Kilis		Özgen et al. 2002	17
501	Karataş Harabesi		Castle	1	1	1	0	1?	0	0	1	Kilis		Özgen et al. 2002	26
502	Tibil Höyüğü		Höyük	1	1	1	0	1?	0	0	1	Kilis		Özgen et al. 2002	29
503	Karacaören Harabesi		Flat Site	1	1	1	0	1?	0	0	0	Kilis		Özgen et al. 2002	30
504	Kantara Höyüğü		Höyük	1	0	1	0	1?	0	0	1	Kilis		Özgen et al. 2002	31
505	Altın Harabesi		Höyük	1	0	1	0	1?	0	0	1	Kilis		Özgen et al. 2002	32
506	Karamelik Höyüğü		Höyük	1	1	1	0	1?	0	0	1	Kilis		Özgen et al. 2002	38
507	Bekere Höyüğü		Höyük	1	1	0	0	1?	0	0	1	Kilis		Özgen et al. 2002	40
508	Leylit Höyük		Höyük	1	1	1	0	1?	0	0	1	Kilis		Özgen et al. 2002	42
509	Vahfin Höyük		Höyük	0	1	1	0	1?	0	0	1	Kilis		Özgen et al. 2002	43
510	Kazıklı Höyük		Höyük	1	1	1	0	1?	0	0	1	Kilis		Özgen et al. 2002	44
511	Müşetil Höyüğü		Höyük	0	1	0	0	1?	0	0	1	Kilis		Özgen et al. 2002	48
512	Kiyalık Mevkii		Flat	1	1	1	0	1?	0	0	0	Kilis		Özgen et al. 2002	49
513	No Name		Scatter	0	1	1	0	1	0	0	1	Elâzığ	Merkez	Whallon 1979	O54/4
514	Köyü Tepesi			1	0	0	0	1	0	0	1	Kütühaya		Efe 1990	5
515	Sokulu Tarla		Flat	1	1	0	0	1	0	0	1	Malatya	Merkez	Özdogan 1977	P50/10
516	Yarım Tepe		Höyük	0	0	0	0	1	0	0	0	Malatya	Merkez	Özdogan 1977	P50/8
517	Sultan Tepe		Höyük	1	0	1	0	1	0	0	1			Seton-Williams 1954	7

ID	Site	ha	Type	CHA	EBA	MBA	MBA-LBA	LBA	OH	EP	IA	Province	District	Publication	Publ. Nr.
518	İncirlik		Höyük	1	0	0	0	1	0	0	1			Seton-Williams 1954	8
519	Yarım Höyük		Höyük	1	0	1	0	1	0	0	0			Seton-Williams 1954	13
520	Zeytinli		Höyük	0	1	1	0	1	0	0	1			Seton-Williams 1954	14
521	Dikili Höyük		Höyük	0	0	0	0	1	0	0	1			Seton-Williams 1954	15
522	Fenni Kireç Hüyüğü		Höyük	0	0	0	0	1	0	0	0			Seton-Williams 1954	23
523	Ceyhan II		Höyük	0	0	1	0	1	0	0	0			Seton-Williams 1954	24
524	Boz Höyük		Höyük	1	1	1	0	1	0	0	1			Seton-Williams 1954	25
525	Molla Ahmet		Höyük	1	1	1	0	1	0	0	1			Seton-Williams 1954	28
526	Cebra Höyük		Höyük	0	0	1	0	1	0	0	1			Seton-Williams 1954	30
527	Yalaközü Höyük		Höyük	0	1	0	0	1	0	0	1			Seton-Williams 1954	32
528	Pasku Hüyüğü		Höyük	1	1	0	0	1	0	0	0			Seton-Williams 1954	35
529	Geçemey Höyük		Höyük	0	1	0	0	1	0	0	0			Seton-Williams 1954	40
530	Minareli Höyük		Hill	1	1	1	0	1	0	0	1			Seton-Williams 1954	41
531	Kiri Köprü		Höyük	1	1	1	0	1	0	0	0			Seton-Williams 1954	48
532	Alapunar		Höyük	0	0	1	0	1	0	0	1			Seton-Williams 1954	54
533	Küçük Mankit		Höyük	0	0	0	0	1	0	0	1			Seton-Williams 1954	56
534	Yılan Kilise		Höyük	0	0	0	0	1	0	0	0			Seton-Williams 1954	57
535	İslamkadi Çiftlik		Höyük	0	0	0	0	1	0	0	1			Seton-Williams 1954	60
536	Ada Tepe II		Höyük	1	0	1	0	1	0	0	1			Seton-Williams 1954	62
537	Soyalı Hüyügü		Höyük	0	0	1	0	1	0	0	1			Seton-Williams 1954	63
538	Hesiğin Tepe		Höyük	0	1	0	0	1	0	0	1			Seton-Williams 1954	64
539	Sirkeli		Höyük	1	1	1	0	1	0	0	1			Seton-Williams 1954	65
540	Camili		Höyük	0	0	1	0	1	0	0	0			Seton-Williams 1954	70
541	Kabarşa		Höyük	0	1	1	0	1	0	0	1			Seton-Williams 1954	71

ID	Site	ha	Type	CHA	EBA	MBA	MBA-LBA	LBA	OH	EP	IA	Province	District	Publication	Publ. Nr.
542	Domuz Höyük		Höyük	1	0	1	0	1	0	0	0			Seton-Williams 1954	73
543	Velican Tepe		Höyük	1	1	1	0	1	0	0	1			Seton-Williams 1954	75
544	Çaputcu Höyük		Höyük	0	0	1	1	1	0	0	0			Seton-Williams 1954	76
545	Çavuşlu		Höyük	1	1	0	0	1	0	0	1			Seton-Williams 1954	81
546	Samsin Hüyüğü		Höyük	1	0	0	0	1	0	0	0			Seton-Williams 1954	82
547	Çatal Höyük I		Höyük	0	0	0	0	1	0	0	0			Seton-Williams 1954	83
548	Kızıl		Höyük	0	1	0	0	1	0	0	0			Seton-Williams 1954	84
549	Esliler		Höyük	0	1	0	0	1	0	0	0			Seton-Williams 1954	86
550	Anberinharkı		Höyük	1	1	0	0	1	0	0	1			Seton-Williams 1954	87
551	Çukur Köprü		Höyük	1	0	0	0	1	0	0	0			Seton-Williams 1954	88
552	Yeniköyü II		Höyük	0	1	1	0	1	0	0	1			Seton-Williams 1954	90
553	Hamzali Buran Çiftlik		Höyük	0	1	0	0	1	0	0	0			Seton-Williams 1954	95
554	Domuz II		Höyük	0	0	0	0	1	0	0	0			Seton-Williams 1954	101
555	Nergis		Höyük	0	1	0	0	1	0	0	0			Seton-Williams 1954	104
556	Kizil Tahta		Höyük	0	0	0	0	1	0	0	0			Seton-Williams 1954	111
557	Yenice Höyük		Höyük	0	1	1	0	1	0	0	0			Seton-Williams 1954	118
558	Alyahanun		Höyük	1	1	1	0	1	0	0	1			Seton-Williams 1954	131
559	Yeniköyü III		Höyük	0	0	0	0	1	0	0	1			Seton-Williams 1954	133
560	Dervişli		Höyük	1	1	0	0	1	0	0	1			Seton-Williams 1954	135
561	Paşa Hüyüğü I		Höyük	0	0	1	1	1	0	0	1			Seton-Williams 1954	138
562	Paşa Hüyüğü II		Höyük	0	0	1	0	1	0	0	1			Seton-Williams 1954	139
563	Höyük		Höyük	0	1	0	0	1	0	0	0			Seton-Williams 1954	140
564	Tilan Höyük		Höyük	1	1	1	0	1	0	0	1			Seton-Williams 1954	141
565	Kara Höyük		Höyük	0	1	0	0	1	0	0	1			Seton-Williams 1954	147

ID	Site	ha	Type	CHA	EBA	MBA	MBA-LBA	LBA	OH	EP	IA	Province	District	Publication	Publ. Nr.
566	Çamurlu Höyük		Höyük	1	1	1	0	1	0	0	1	Kilis	Elbeyli	Özgen et al. 2004	102
567	Alahan Höyüğü		Höyük	1	1	1	0	1	0	0	1	Kilis	Elbeyli	Özgen et al. 2004	103
568	Salhan Höyüğü		Höyük	1	1	1	0	1	0	0	1	Kilis	Elbeyli	Özgen et al. 2004	104
569	Tileyli Höyük		Höyük	1	1	1	0	1	0	0	1	Kilis	Elbeyli	Özgen et al. 2004	105
570	Taşlıbakar Höyüğü		Höyük	0	0	1	0	1	0	0	1	Kilis	Elbeyli	Özgen et al. 2004	106
571	Yeşilyurt Höyüğü		Höyük	1	1	1	0	1	0	0	1	Kilis	Elbeyli	Özgen et al. 2004	110
572	Yazılıbecer Höyüğü		Höyük	1	1	1	0	1	0	0	1	Kilis	Elbeyli	Özgen et al. 2004	112
573	İkizkaya Höyüğü		Höyük	1	1	1	0	1	0	0	1	Kilis	Elbeyli	Özgen et al. 2004	117
574	Tilkip Höyüğü		Höyük	1	1	1	0	1	0	0	1	Kilis	Elbeyli	Özgen et al. 2004	120
575	Alimantara Höyüğü		Höyük	1	1	1	0	1	0	0	1	Kilis	Elbeyli	Özgen et al. 2004	121
576	Kumsurun Höyüğü		Höyük	1	1	1	0	1	0	0	1	Kilis	Elbeyli	Özgen et al. 2004	123
577	Alahan Harabesi		Flat	0	0	1	0	1	0	0	1	Kilis	Elbeyli	Özgen et al. 2004	127
578	Saatlı Höyügü		Höyük	1	1	1	0	1	0	0	1	Kilis	Elbeyli	Özgen et al. 2004	128
579	Martavan Höyüğü		Höyük	1	1	1	0	1	0	0	1	Kilis	Elbeyli	Özgen et al. 2004	130
580	Hanik Höyüğü		Höyük	1	1	1	0	1	0	0	1	Kilis	Elbeyli	Özgen et al. 2004	136
581	Hasancalı Höyüğü		Höyük	1	0	1	0	1	0	0	0	Kilis	Elbeyli	Özgen et al. 2004	137
582	Iskele Höyüğü		Höyük	0	1	1	0	1	0	0	0	Isparta	Hacilar	Özsait 2004b	148
583	Gelendost Höyük		Höyük	0	1	1	0	1	0	0	0	Isparta	Gelendost	Özsait 2004b	146
584	Ilgın Kaleköy Kalesi		Kale	0	0	1	0	1	0	0	1	Konya	Ilgın	Bahar & Koçak 2004	106.06
585	Yalburt		Slope	0	0	1	0	1	0	0	0	Konya	Ilgın	Bahar & Koçak 2004	106.12
586	Köylütolu		Höyük	0	0	1	0	1	0	0	0	Konya	Ilgin	Bahar & Koçak 2004	106.20
587	Kekeç		Yamaç	1	1	0	0	1	0	0	1	Konya	Ilgın	Bahar & Koçak 2004	106.16
588	Gamel H. Yenice		Höyük	0	0	1	0	1	0	0	1	Konya	Sarayönü	Bahar & Koçak 2004	108.08
589	Ladik Tepe Höyük		Höyük	0	1	1	0	1	0	0	1	Konya	Sarayönü	Bahar & Koçak 2004	108.11, 02-58

ID	Site	ha	Type	CHA	EBA	MBA	MBA-LBA	LBA	OH	EP	IA	Province	District	Publication	Publ. Nr.
590	Örentepe (Mut)		Höyük	0	1	1	0	1	0	0	0		Mut	French 1965	6
591	Cem Sırtı		Höyük	0	0	1	0	1	0	0	0	Urfa		Seradoğlu 1977	
592	Bebi West & Bebi		Surface	0	0	1	0	1	0	0	1			Kealhofer 2005	7
593	Kızılarını Tepe		Höyük	0	0	1	0	1	0	0	1			Kealhofer 2005	2
594	Tuzdamınkaşı Mevkii			0	0	0	0	1	1	0	0	Çankırı	Yapraklı	Sipahi & Yıldırım 2005	03-08
595	Harmandali 2			0	0	0	0	1	0	0	0	Sivas	Altınyayla	Ökse 1995	93-05a
596	Ortaköy (Sapinuwa)		Flat	?	?	0	0	1	1	1	?	Çorum		Süel	excavated
597	Örenşehir		Flat	0	0	0	0	1	1	0	0	Çankırı	Orta	Matthews	97.40
598	Höyük		Höyük	0	1	1	0	1	1	0	1	Tokat	Zile	Özgüç 1982	
599	Kaman-Kale Höyük		Höyük	1	1	1	1	1	0	0	1			Omura	excavated
600	Küçük Çiftlik		Höyük	0	0	0	0	1	0	0	1			Seton-Williams 1954	33
602	Mısıs		Höyük	1	1	1	0	1	0	0	1			Seton-Williams 1954	11
603	Soli Pompeiopolis		Höyük	0	0	1	0	1	0	0	1			Seton-Williams 1954	
605	Yaşıl Höyük		Höyük	1	1	1	0	1	0	0	1			Seton-Williams 1954	58
606	Hanaytepe		Höyük	1	1	0	0	1	0	0	0	Çanakkale		Rüstem & Bieg 2003	5
607	Ballı Dağ		Höyük	0	0	0	0	1	0	0	0	Çanakkale		Rüstem & Bieg 2003	8
608	Adatepe		Höyük	0	0	0	0	1	0	0	0	Çanakkale		Rüstem & Bieg 2003	13a
609	Asarlık Tepe		Höyük	0	0	1	1	1	0	0	1	Çanakkale		Rüstem & Bieg 2003	22
610	Kilistepe		Höyük	1	1	1	1	1	1	1	1	Çanakkale		Rüstem & Bieg 2003	26
611	Doğanhisar-Karahöyük		Höyük	1	1	0	0	1	0	0	1	Konya	Doğanhisar	Bahar and Koçak 2004	105.02
612	Sarayönü Karatepe		Höyük	0	1	1	0	1	0	0	1	Konya	Sarayönü	Bahar and Koçak 2004	108.05
613	Çeşmelisebil		Höyük	0	1	1	0	1	0	0	1	Konya	Sarayönü	Bahar and Koçak 2004	108.13
614	Köprünün Küllün		Höyük	1	1	0	0	1	0	0	0	Konya	Karaköy	Bahar and Koçak 2004	106.26
615	Zengi Höyük		Slope	0	1	1	0	1	0	0	0	Konya	Sarayönü	Bahar and Koçak 2004	108.01

ID	Site	ha	Type	CHA	EBA	MBA	MBA-LBA	LBA	OH	EP	IA	Province	District	Publication	Publ. Nr.
616	Atlantı Karatepe		Höyük	0	0	0	0	1	0	0	0	Konya	Kadınhanı	Bahar & Koçak 2004	107.05
617	Kadınhanı Büyük Höyük		Höyük	1	1	1	0	1	0	0	1	Konya	Kadınhanı	Bahar & Koçak 2004	107.10
618	Yuğ Tepesi		Höyük	1	1	1	0	1	0	0	0	Konya	Pınarbası	Bahar & Koçak 2004	113.14
619	Doğu Güvenç		Höyük	0	1	0	0	1	0	0	1	Konya	Selçuklu	Bahar & Koçak 2004	113.19
620	Tekintaş Höyük		Höyük	0	1	1	0	1	0	0	1	Konya	Meram	Bahar & Koçak 2004	116.09
621	Çaltı Karahöyük		Höyük	0	1	1	0	1	0	0	1	Konya	Selçuklu	Bahar & Koçak 2004	113.25
622	Kozanlı Merkez		Höyük	0	1	0	0	1	0	0	0	Konya	Kulu	Bahar & Koçak 2004	110.02
623	Sızma		Höyük	1	1	0	0	1	0	0	1	Konya	Selçuklu	Bahar & Koçak 2004	113.07
624	Üzümcü Höyük		Höyük	0	0	0	0	1	0	0	0	Konya	Karatay	Bahar & Koçak 2004	117.07
625	Kaplıca		Kale	0	0	0	0	1	0	0	0	Konya	Seydişehir	Bahar & Koçak 2004	119.04
626	Bayat		Slope	0	1	1	0	1	0	0	1	Konya	Beyşehir	Bahar & Koçak 2004	115.04
627	Aydın Çavuş		Tepeüstü	0	0	1	0	1	0	0	1	Konya	Meram	Bahar & Koçak 2004	116.01
628	Çomaklı		Höyük	1	1	1	0	1	0	0	1	Konya	Meram	Bahar & Koçak 2004	116.03
629	Alakova Höyük		Höyük	0	1	1	0	1	0	0	0	Konya	Meram	Bahar & Koçak 2004	116.05
630	Kızılören Han		Flat	0	0	0	0	1	0	0	0	Konya	Meram	Bahar & Koçak 2004	116.11
631	Hatıp Kale		Kale	0	1	0	0	1	0	0	1	Konya	Meram	Bahar & Koçak 2004	116.16
632	Hatunsaray I		Höyük	1	1	0	0	1	0	0	1	Konya	Meram	Bahar & Koçak 2004	116.24
633	Kıcıkışla		Höyük	0	0	0	0	1	0	0	1	Konya	Karapınar	Bahar & Koçak 2004	122.08
634	Büyük Küllü Tepe		Tepeüstü	0	0	0	0	1	0	0	0	Konya	Emirgazi	Bahar & Koçak 2004	123.01
635	Kayacık Höyük		Höyük	0	1	1	0	1	0	0	1	Konya	Ahırlı	Bahar & Koçak 2004	125.01
636	Sarıoğlan-Beviran		Höyük	0	1	1	0	1	0	0	1	Konya	Bozkır	Bahar & Koçak 2004	126.03
637	Sazlı Höyük		Höyük	1	1	1	0	1	0	0	0	Konya	Bozkır	Bahar & Koçak 2004	126.06

ID	Site	ha	Type	CHA	EBA	MBA	MBA-LBA	LBA	OH	EP	IA	Province	District	Publication	Publ. Nr.
638	Köydağı		Tepeüstü	0	1	0	0	1	0	0	1	Karaman	Merkez	Bahar & Koçak 2004	201.01
639	Alibeyhöyüğü		Höyük	0	0	1	0	1	0	0	0	Konya	Çumra	Bahar & Koçak 2004	121.01
640	Gökhöyük		Höyük	1	1	0	0	1	0	0	1	Konya	Çumra	Bahar & Koçak 2004	121.02
641	Dineksaray		Höyük	0	1	0	0	1	0	0	1	Konya	Çumra	Bahar & Koçak 2004	121.04
642	Sırçalı Höyük		Höyük	0	0	0	0	1	0	0	0	Konya	Çumra	Bahar & Koçak 2004	121.05
643	Cicek		Kale	0	1	0	0	1	0	0	1	Konya	Çumra	Bahar & Koçak 2004	121.08
644	Kısıkyayla		Höyük	1	1	1	0	1	0	0	1	Konya	Çumra	Bahar & Koçak 2004	121.13
645	İslihisar Gavur Höyük		Höyük	1	1	1	0	1	0	0	1	Karaman	Merkez	Bahar & Koçak 2004	201.15
646	Dağ Oteli Havuz Höyük		Tepeüstü	0	0	1	0	1	0	0	0	Karaman	Merkez	Bahar & Koçak 2004	201.16
647	Yollarbaşı		Höyük	0	1	0	0	1	0	0	1	Karaman	Merkez	Bahar & Koçak 2004	201.19
648	Üyüktepe		Höyük	1	1	0	1	1	0	0	0	Kastamonu	Merkez	Marro et al. 1996	C32/1
649	Höyükdoğru		Höyük			0	1	1	0	0	0	Kastamonu	Araç	Kuzucuroğlu et al. 1997	D30/1
650	Kayabaşı		Höyük	1	1	0	1	1	0	0	0	Kastamonu	Araç	Kuzucuroğlu et al. 1997	D30/6

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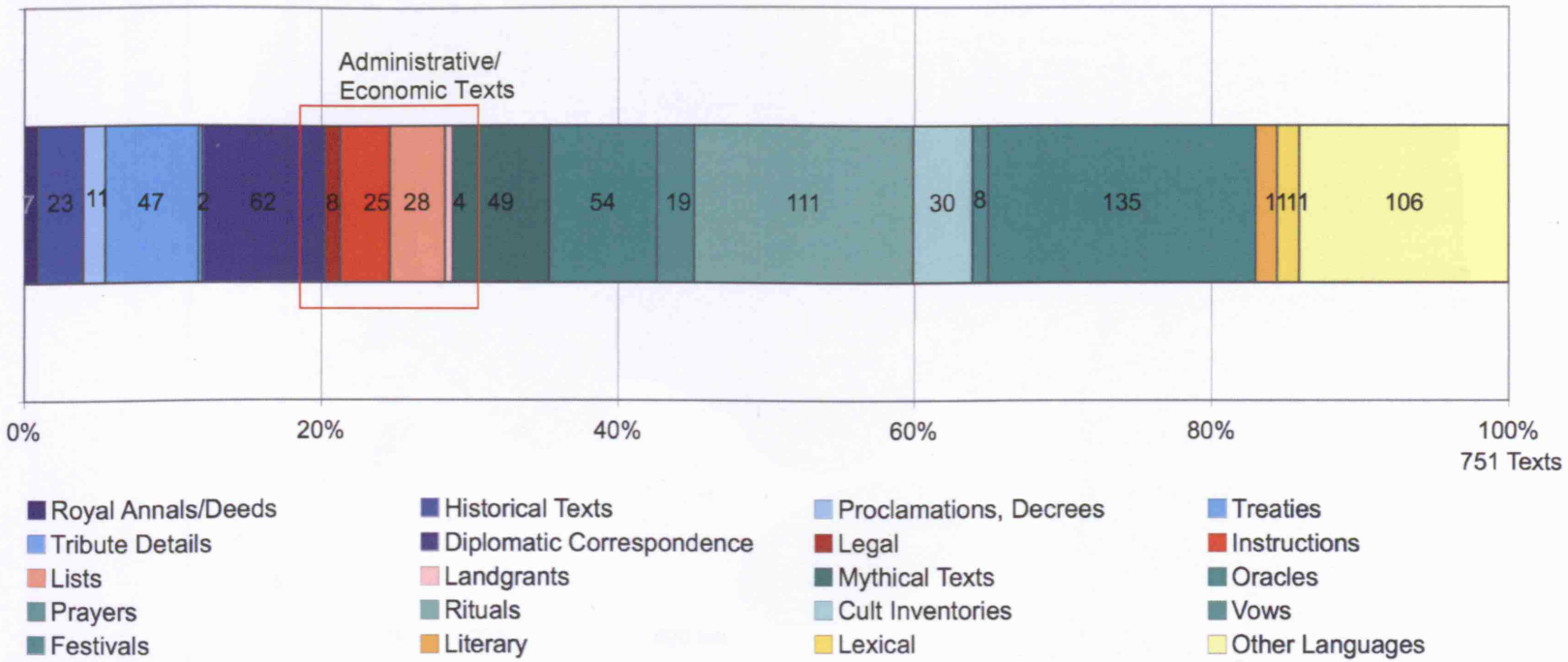
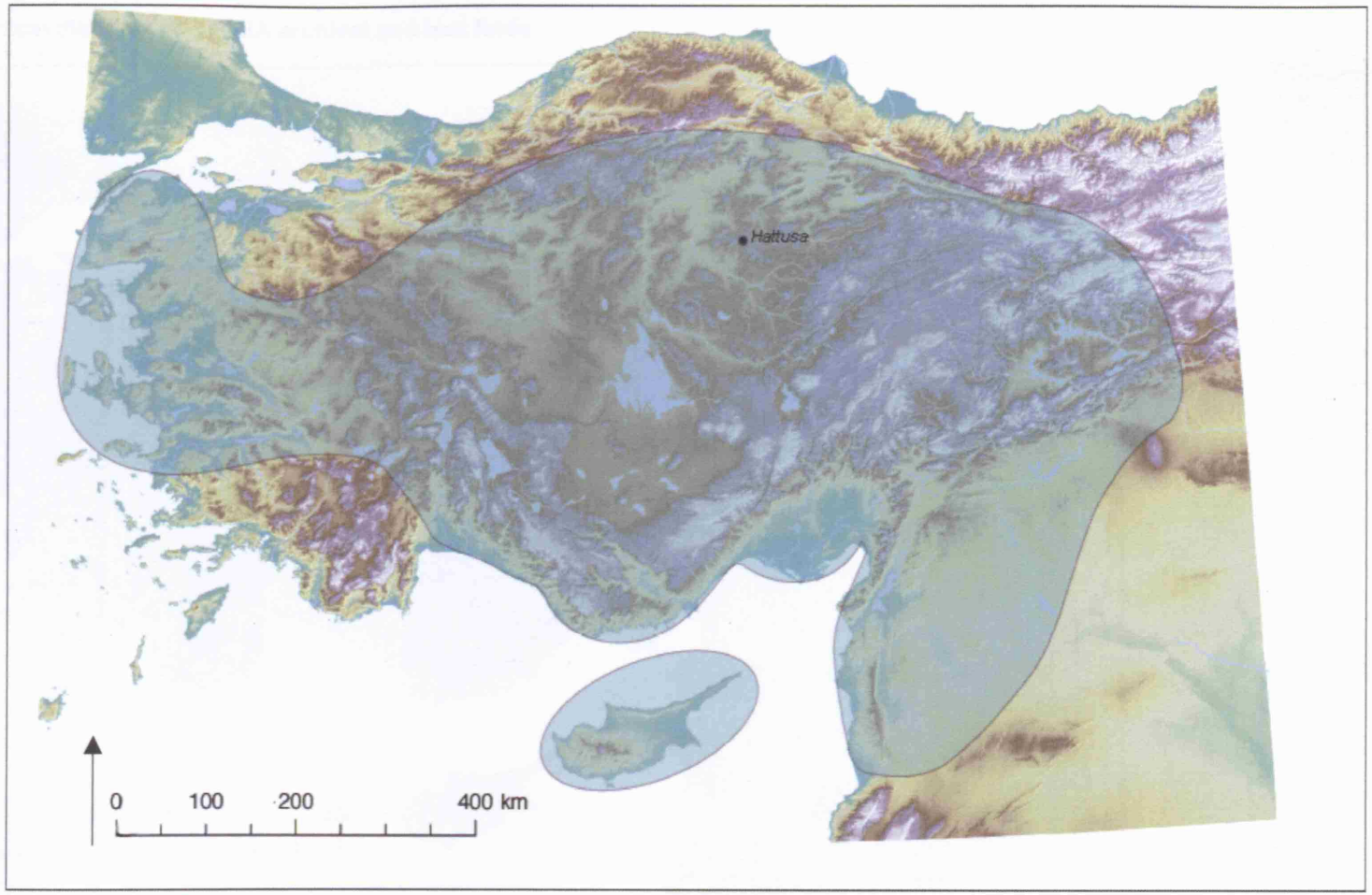
FIGURES AND MAPS

Figure 1: Distribution of text classes in the Boğazköy-Hattusa archives

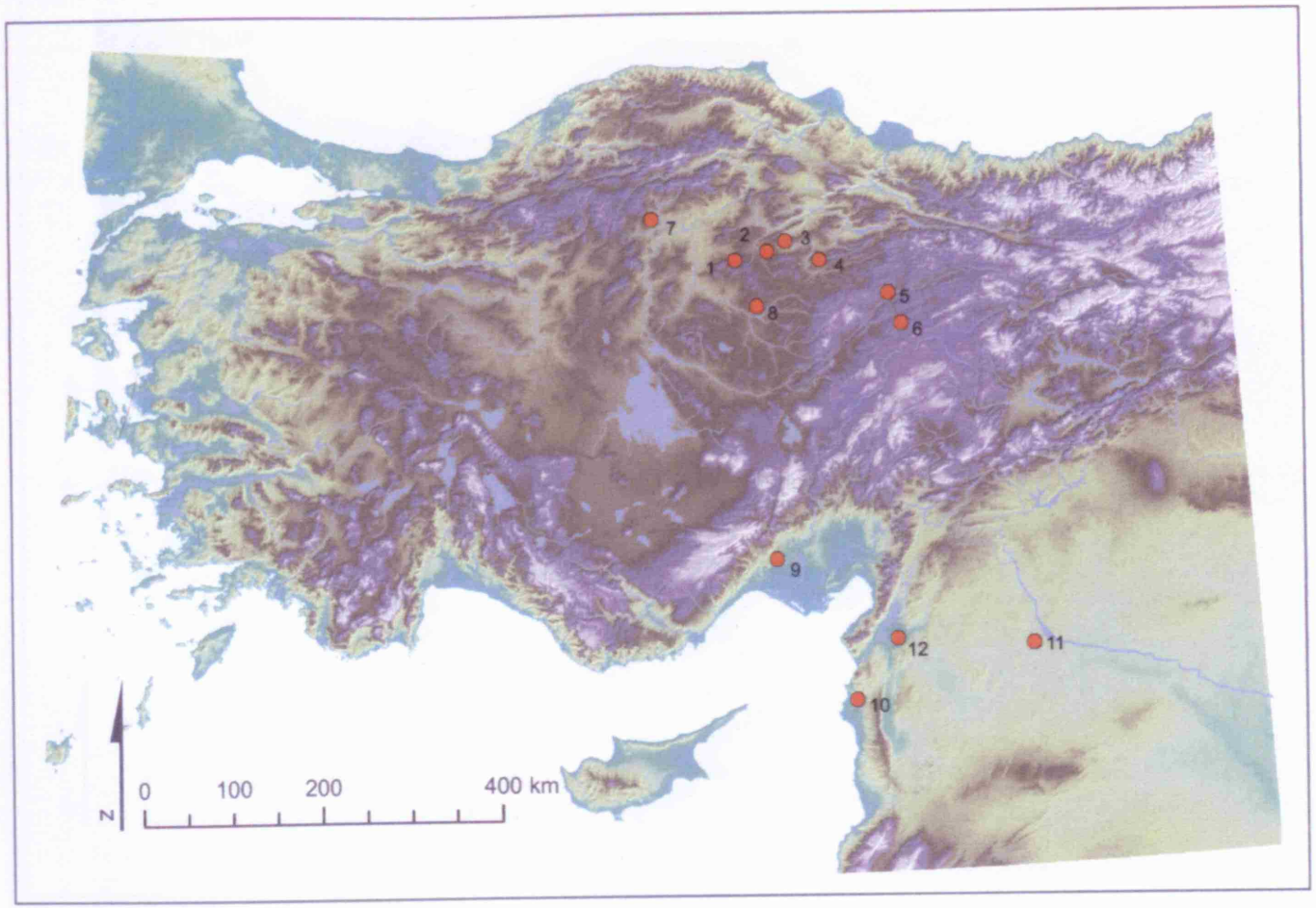


Based on CTH numbers (Laroche 1971 and www.asor.org/HITTITE/CTHmaindir.html)

Map 1: Hypothetical extent of the Hittite empire (ca. 1400-1180 BC) according to the textual sources

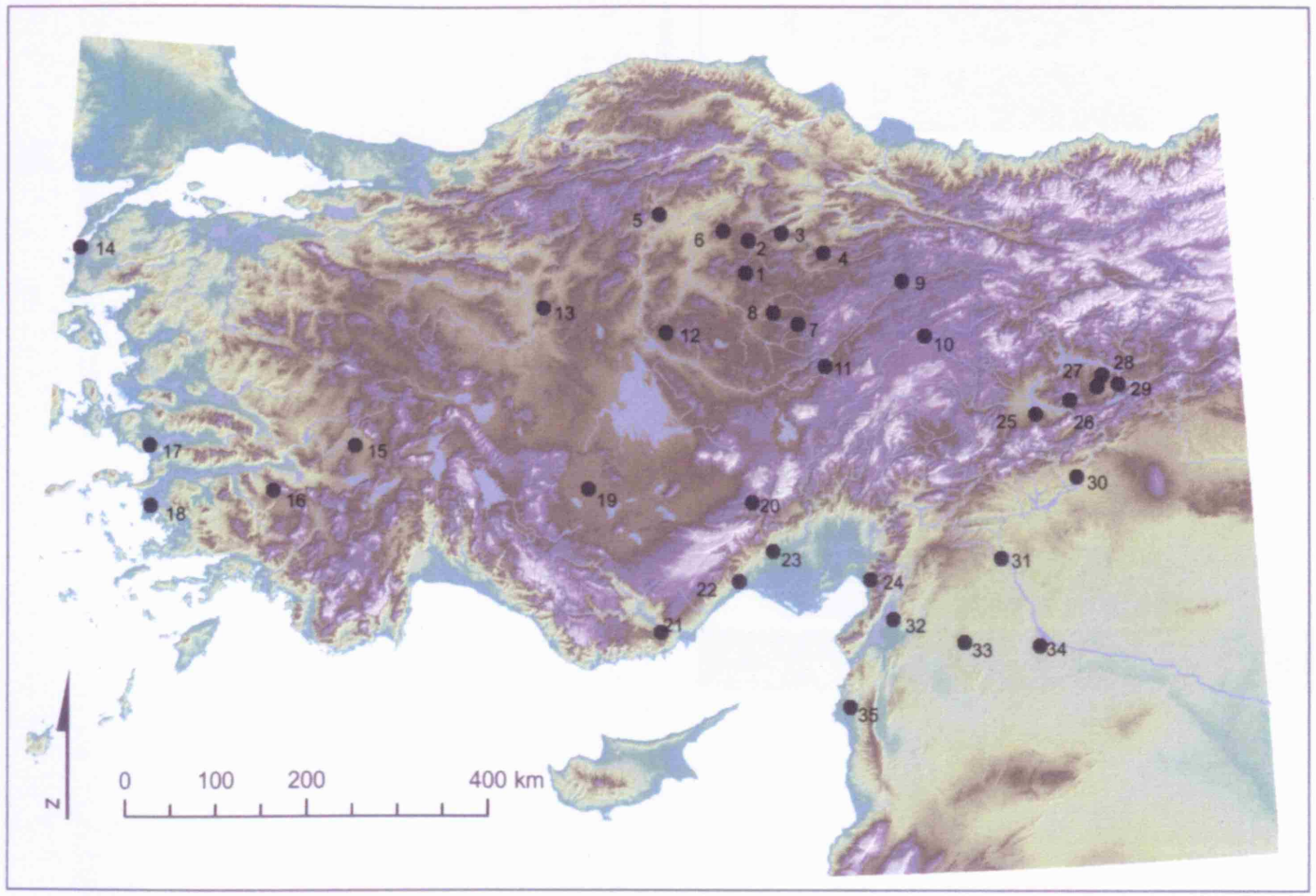


Map 2: Geographical distribution of LBA archival and text finds



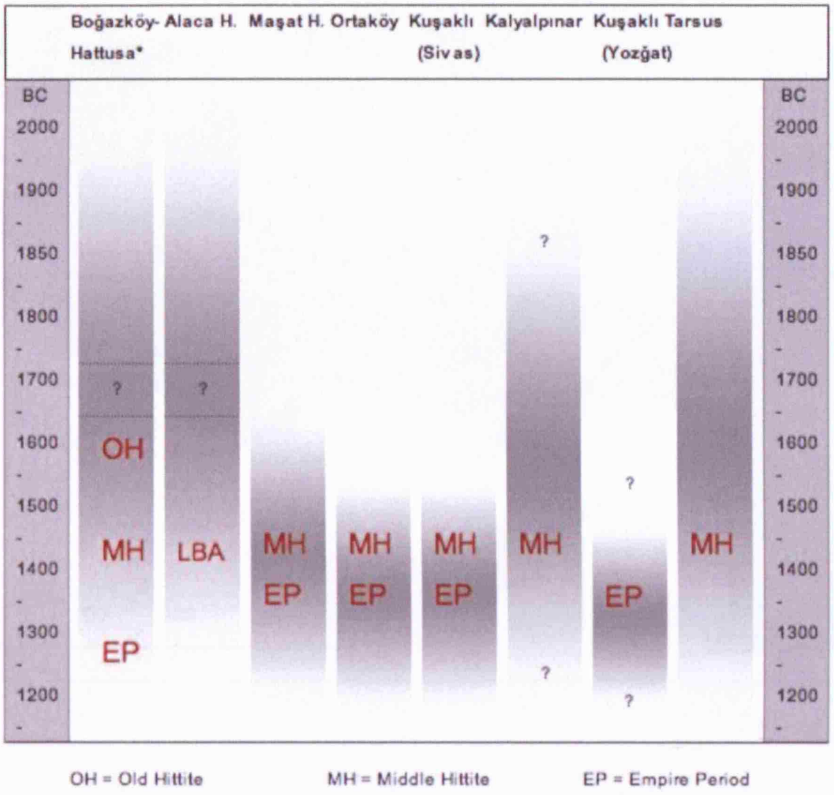
1 Boğazköy-Hattusa
2 Alaca Höyük
3 Ortaköy-Sapinuwa
4 Maşat-Tapikka
5 Kayalıpınar
6 Kuşaklı-Sarissa
7 İnandık Tepe
8 Kuşaklı (Yozgat)
9 Gözlu Kule-Tarsus
10 Ras Shamra-Ugarit
11 Meskene-Emar
12 Atchana-Alalakh

Map 3: LBA sites mentioned in the analysis



1 Boğazköy-Hattusa
2 Alaca Höyük
3 Ortaköy-Sapinuwa
4 Maşat-Tapikka
5 İnandık Tepe
6 Hüseyindede
7 Alişar Höyük
8 Çadır Höyük
9 Kayalıpınar
10 Kuşaklı-Sarissa
11 Kültepe-Kanes
12 Kaman-Kalehöyük
13 Gordion
14 Troy
15 Beycesultan
16 Aphrodisias
17 Ephesus
18 Miletus
19 Karahöyük-Konya
20 Porsuk
21 Kilise Tepe
22 Yumuktepe-Mersin
23 Gözlu Kule-Tarsus
24 Kinet Höyük
25 Arslantepe
26 İmikuşağı
27 Norşuntepe
28 Tepecik
29 Korucutepe
30 Tille Höyük
31 Carchemish
32 Atchana-Alalakh
33 Halab-Aleppo
34 Meskene-Emar
35 Ras Shamra-Ugarit

Figure 2: Chronological spans of sites with archival and texts finds



OH = Old Hittite MH = Middle Hittite EP = Empire Period

Map 4: NCA political and cultural core region

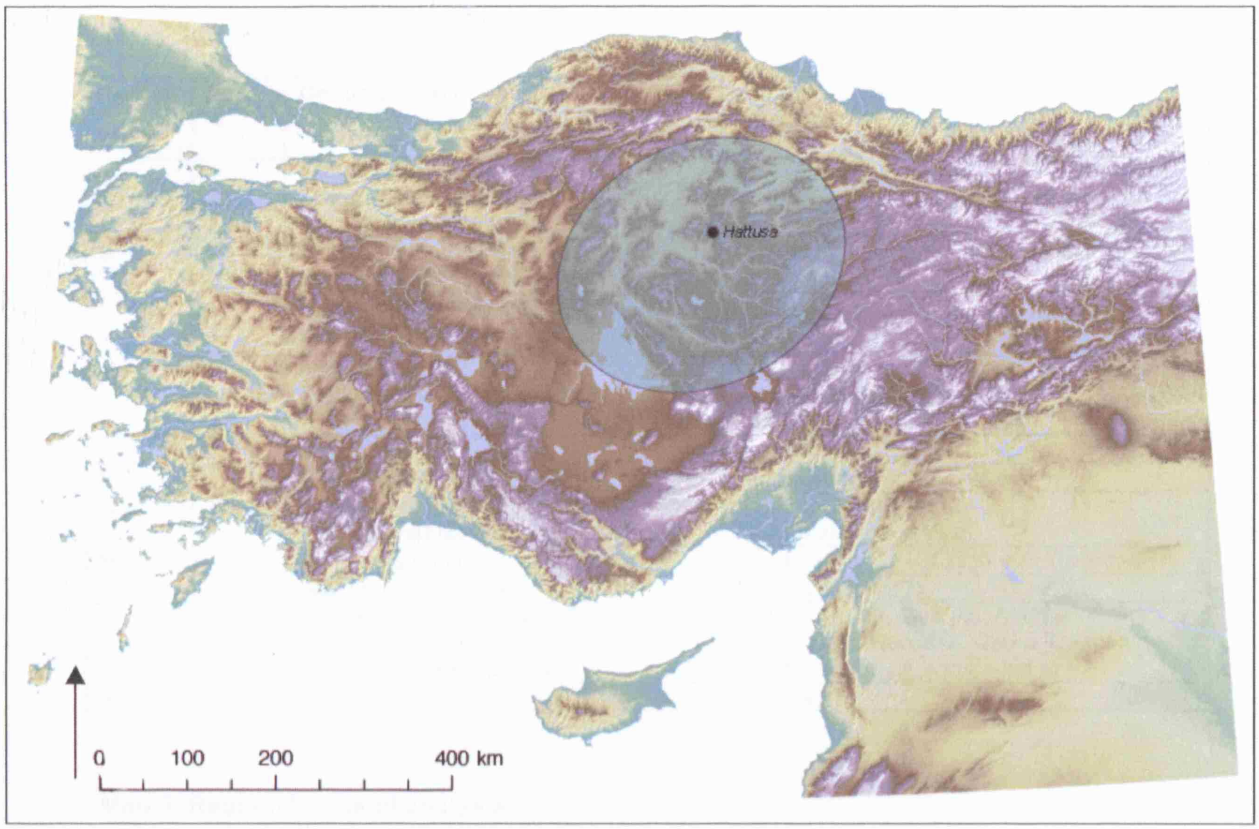


Table 2: Regional units of analysis

Region	Part	Geographical Scope	Hittite Political Geography
A	1 2 3	central plateau central plateau (north-east) central plateau (south)	Land of Hatti Upper Land Lower Land
B	1 2	north-central and Pontic Anatolia north-east and Pontic Anatolia	Provinces Pala and Tumana; Kaska Azzi-Hayasa
C	1 2	north-west central Anatolia (Phrygia) south-west central Anatolia (Pisidia)	Arwanna, Kalasma, Kassiya, Pitassa, Arzawa
D	1 2 3	north-west Anatolia west Anatolia and Aegean Coast south coast	Wilusa (Assuwa) Assuwa and Arzawa Lukka
E		Rough Cilicia	Tarhuntassa
F		Cilicia, Hatay	Kizzuwatna
G	1 2	east-central Plateau eastern Anatolia (Malatya and Elâzığ)	Tegarama, Kummaha Melid/Maladiya, Isuwa
H		Euphrates north of Carchemish	Carchemish
I		east of the Euphrates	Mitanni/Assyria(?)
J	1 2 3	southern Hatay / northern Syria (costal) northern Syria (hinterland) northern Syria (Euphrates)	Mukish, Ugarit, Siyannu, Amurru Halab, Niya, Nuhasse, Qatna, Qadesh Astata
K		Cyprus	Alasiya(?)

Map 5: Regional units of analysis

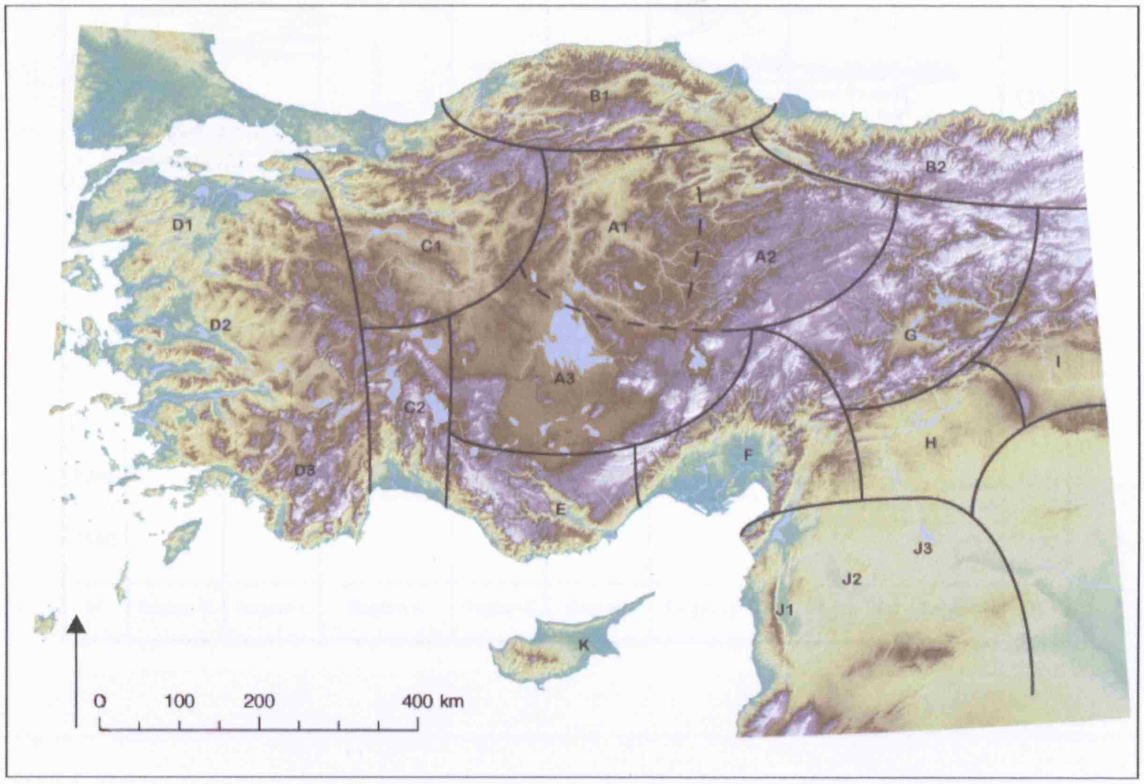


Figure 3: Overview of Hittite imperial development according to the textual sources

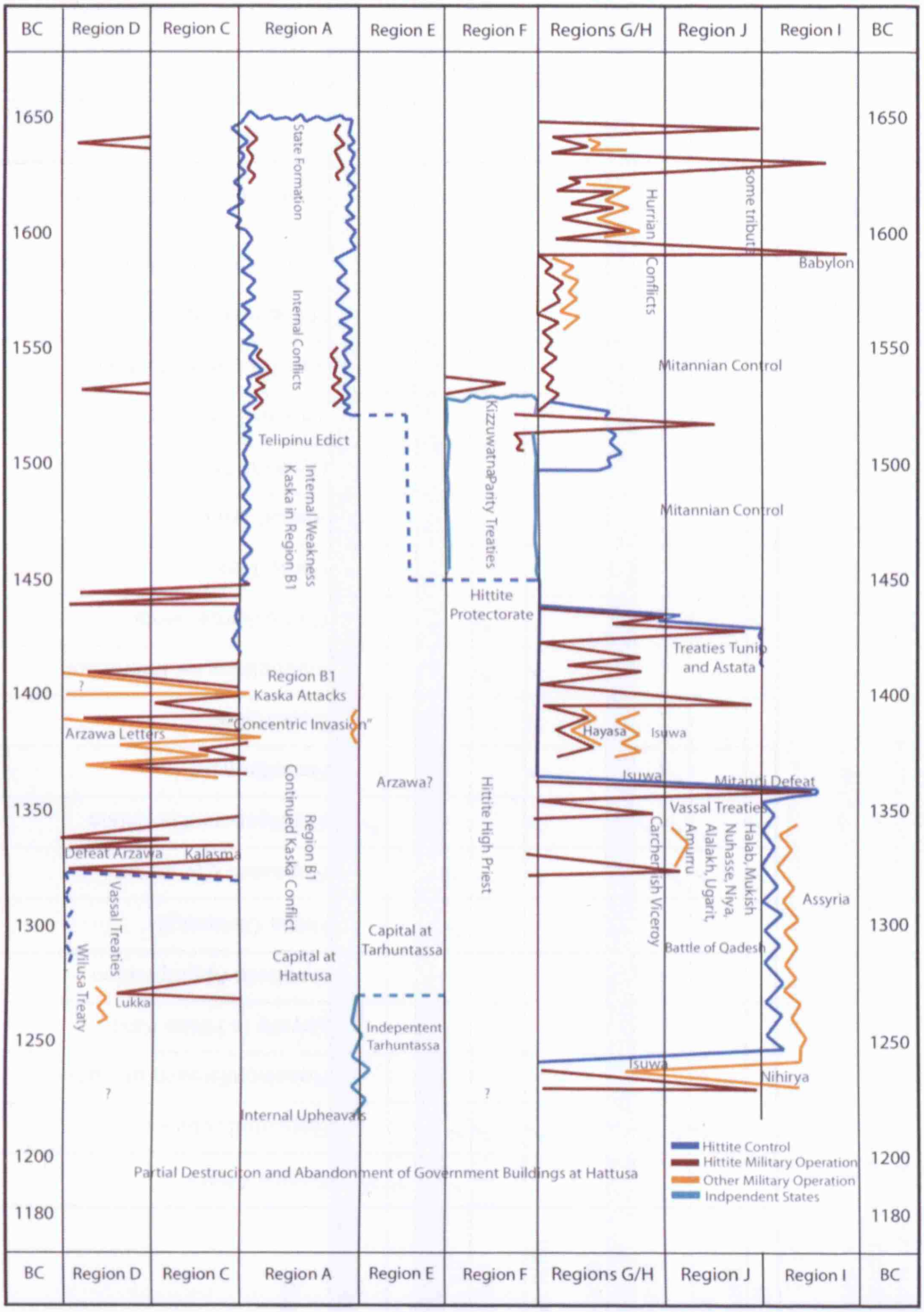


Table 3: Hittite and local strategies in Region B1

Hittite King	Enemy Attack	Repeated Attacks	Rebellion/Breach of Oath	Loyalty to Hittite King	Symbolic Appropriation	Hittite Campaign	Repeated Campaign	Fortifications/Garrisons	Resettlement	Deportation	Instructions for Interaction	Oaths/Agreements	Parity Treaty	Vassal Treaty	Dynastic Marriage	Tribute/Tax/Troops	Tax/Tribute Reductions	Hittite Institution(s)	Cult/Symbolic Appropriation	Diplomatic Correspondence	Retrospection?	Sources (CTH)
Old Hittite																						
Hantili*	?							✓													✓	11, 89
Telipinu*	?																		✓**			61
Middle Hittite																						
Tudhaliya I(II)	✓	?				✓	?															142
Arnuwanda I		✓					?				✓	✓										137, 138-140***, 257, 260, 261, 375
Tudhaliya II(III) and Suppiluliuma		✓					✓	✓	✓	✓	✓										✓	40, 61
Empire																						
Suppiluliuma I		✓					✓	✓	✓												✓	40, 61
Mursili II		✓					✓	✓	✓													61, (89)
Muwatalli and Hattusili		✓					✓														✓	89
Hattusili III		✓					✓	✓	✓			✓										81, 89

Sources: Goetze (1951; 1933); Güterbock (1956); Garstang and Gurney (1959); Schuler (1965); Otten (1981); Bryce (1986, 1998); Alp (1991); Klengel (1999)

** Strategies, which are either not unambiguously ascribable to the Kaska problem, or represent backward projections of the imperial phase with no textual support from Old Hittite texts (Klinger 2002).*

*** Telipinu is said to have been the last Hittite king to have had access to the cult city of Nerik in the Annals of Mursili II (CTH 61).*

**** Uncertain dating: Klengel (1999, 117) dates them to the Middle Hittite Period, Bryce (1986, 92) to Hattusili III.*

Table 4: Hittite and local strategies in Region B2

Hittite King	Enemy Attack	Repeated Attacks	Rebellion/Breach of Oath	Loyalty to Hittite King	Symbolic Appropriation	Hittite Campaign	Repeated Campaign	Fortifications/Garrisons	Resettlement	Deportation	Instructions for Interaction	Oaths/Agreements	Parity Treaty	Vassal Treaty	Dynastic Marriage	Tribute/Tax/Troops	Tax/Tribute Reductions	Hittite Institution(s)	Cult/Symbolic Appropriation	Diplomatic Correspondence	Retrospection?	Sources (CTH)
Old Hittite																						
"early days of Hatti"	✓																				✓	88
Middle Hittite																						
Tudhaliya II(III) and Suppiluliuma		✓					✓					✓		?							✓	40, 42
Empire																						
Suppiluliuma I		✓					?							✓	✓						✓	42, 61
Mursili II		✓					✓					✓		?								61
Muwatalli II and Hattusili III							?															81

Sources: Goetze (1933; 1940); Güterbock (1956); Gurney and Garstang (1959); Klengel (1999)

Table 5: Hittite and local strategies in Region D1 ("Assuwa")

Hittite King	Enemy Attack	Repeated Attacks	Rebellion/Breach of Oath	Loyalty to Hittite King	Symbolic Appropriation	Hittite Campaign	Repeated Campaign	Fortifications/Garrisons	Resettlement	Deportation	Instructions for Interaction	Oaths/Agreements	Parity Treaty	Vassal Treaty	Dynastic Marriage	Tribute/Tax/Troops	Tax/Tribute Reductions	Hittite Institution(s)	Cult/Symbolic Appropriation	Diplomatic Correspondence	Retrospection?	Sources (CTH)
ASSUWA																						
Old Hittite																						
Middle Hittite																						
Tudhaliya I(II)	✓		✓			✓				✓												142*, Bronze Sword
Empire																						

Sources: Garstang and Gurney (1959); Heinhold-Krahmer (1977); Bryce (1998); Klengel (1999)
**Redated from Tudhaliya IV to Tudhaliya I(II).*

Table 6: Hittite and local strategies in Region D1 ("Wilusa")

Hittite King	Enemy Attack	Repeated Attacks	Rebellion	Loyalty to Hittite King	Symbolic Appropriation	Hittite Campaign	Repeated Campaign	Fortifications/Garrisons	Resettlement	Deportation	Instructions for Interaction	Oaths/Agreements	Parity Treaty	Vassal Treaty	Dynastic Marriage	Tribute/Tax/Troops	Tax/Tribute Reductions	Hittite Institution(s)	Cult/Symbolic Appropriation	Diplomatic Correspondence	Retrospection?	Sources (CTH)
WILUSA																						
Labarna*						?															✓	76
Old Hittite																						
Hattusili I*						?															✓	76
Middle Hittite																						
Tudhaliya I(II)	✓					✓				✓											✓	142, 76
Empire																						
Suppiluliuma I				✓																	✓	76
Mursili II				✓																	✓	76
Muwatalli II				✓				✓						✓		✓						76, 191**

Source: Garstang and Gurney (1959, 20-22); Heinhold-Krahmer (1977); Bryce (1998); Klengel (1999)

** Alaksandu treaty (CTH 76): Labarna (I or II?) is mentioned to have defeated Arzawa and Wilusa (Heinhold-Krahmer 1977, 18-19)*

***Letter of Manapa-Tarhunta mentions Hittite troops in Wilusa (Klengel 1999, 203).*

Table 7: Hittite and local strategies in Region D2 ("Arzawa")

Hittite King	Enemy Attack	Repeated Attacks	Rebellion/Breach of Oath	Loyalty to Hittite King	Symbolic Appropriation	Hittite Campaign	Repeated Campaign	Fortifications/Garrisons	Resettlement	Deportation	Instructions for Interaction	Oaths/Agreements	Parity Treaty	Vassal Treaty	Dynastic Marriage	Tribute/Tax/Troops	Tribute/Tax Reductions	Hittite Institution(s)	Cult/Symbolic Appropriation	Diplomatic Correspondence	Retrospection?	Sources (CTH)
ARZAWA																						
Labarna*						?															✓	76
Old Hittite																						
Hattusili I*						✓															✓	4, 8 and 9**, 19, 76
Amunna	?					✓															✓	19
Middle Hittite																						
Tudhaliya I(II)	✓					✓															✓	142, 143
Tudhaliya I(II) and Arnuwanda																					✓	143
Tudhaliya II(III)	✓																				✓	88, EA 31-32
Empire																						
Suppiluliuma I						✓	✓								✓***						✓	40, 61, 67, 68, 69, 76
Mursili II		✓	✓				✓							✓		✓						61, 67, 68, 69, 376****
Muwatalli II						✓								✓		✓						76
Hattusili III			?																			181, 182, 209.7
Tudhaliya IV			✓							✓												211.4

Source: Goetze (1933, 1940); Güterbock (1956); Garstang and Gurney (1959, 20-22); Heinhold-Krahmer (1977); Bryce (1998); Klengel (1999)

** Alaksandu treaty (CTH 76): mention of Labarna (I or II ?) victory over Arzawa and Wilusa (Heinhold-Krahmer 1977, 18-19)*

***Difficult passage in the Palace Chronicle (CTH 8 and 9) which suggests a Hittite official was in Arzawa; it is unclear if he was on a mission or actually stationed there as part of Hittite control over the region (Heinhold-Krahmer 1977, 20-21).*

**** Suppiluliuma makes a refugee from Arzawa his son-in-law (Klengel 1999, 143).*

***** Pest Prayer of Mursili II (CTH 376) mentions Arzawa as an independent political entity (Klengel 1999, 181).*

Table 8: Hittite and local strategies in Region D2 ("Mira-Kuwaliya")

Hittite King	Enemy Attack	Repeated Attacks	Rebellion/Breach of Oath	Loyalty to Hittite King	Symbolic Appropriation	Hittite Campaign	Repeated Campaign	Fortifications/Garrisons	Resettlement	Deportation	Instructions for Interaction	Oaths/Agreements	Parity Treaty	Vassal Treaty	Dynastic Marriage	Tribute/Tax/Troops	Tribute/Tax Reductions	Hittite Institution(s)	Cult/Symbolic Appropriation	Diplomatic Correspondence	Retrospection?	Sources (CTH)
MIRA-KUWALIYA																						
Old Hittite																						
Middle Hittite																						
Tudhaliya I(II)								?													✓	68
Tudhaliya I(II) and Arnuwanda				✓																		147
Empire																						
Suppiluliuma I							✓								✓						✓	40, 61, 68
Mursili II	✓		✓*				✓	✓						✓	✓	✓				✓	✓	61, 68, 76, 214.3, KUB XVIII 15
Muwatalli II											✓											76
Hattusili III**				✓																		
Tudhaliya IV					✓***																	

Source: Goetze (1933); Güterbock (1956); Garstang and Gurney (1959, 20-22); Heinhold-Krahmer (1977); Bryce (1998); Klengel (1999)

** Mashuiluwa of Mira involved with king of Ahhiyawa*

*** Letter from Ramses II to Kupanta-Kurunta of Mira about the affair of Urhi-Tesub (KBo I 24, KUB III 23 and KUB III 84, Klengel 1999, 222); also interference of Ahhiyawa in western Anatolia.*

**** Karabel reliefs (Hawkins 1998).*

Table 9: Hittite and local strategies in Region D2 ("Seha River Land")

Hittite King	Enemy Attack	Repeated Attacks	Rebellion/Breach of Oath	Loyalty to Hittite King	Symbolic Appropriation	Hittite Campaign	Repeated Campaign	Fortifications/Garrisons	Resettlement	Deportation	Instructions for Interaction	Oaths/Agreements	Parity Treaty	Vassal Treaty/Appointment	Dynastic Marriage	Tribute/Tax/Troops	Tribute/Tax Reductions	Hittite Institution(s)	Cult/Symbolic Appropriation	Diplomatic Correspondence	Retrospection ?	Sources (CTH)
SEHA RIVER L.																						
Old Hittite																						
Middle Hittite																						
Tudhaliya I(II)		✓ ?					✓															142
Empire																						
Suppiluliuma I				?								?									✓	40, 69
Mursili II			✓				✓				✓			✓		✓						61, 69
Muwatalli II															✓						✓	105
Hattusili III				✓																	✓	105

Source: Goetze (1933); Güterbock (1956); Garstang and Gurney (1959, 20-22); Heinhold-Krahmer (1977); Bryce (1998); Klengel (1999)

Table 10: Hittite and local strategies in Region D2 ("Hapalla")

Hittite King	Enemy Attack	Repeated Attacks	Rebellion/Breach of Oath	Loyalty to Hittite King	Symbolic Appropriation	Hittite Campaign	Repeated Campaign	Fortifications/Garrisons	Resettlement	Deportation	Instructions for Interaction	Oaths/Agreements	Parity Treaty	Vassal Treaty/Appointment	Dynastic Marriage	Tribute/Tax/Troops	Tribute/Tax Reductions	Hittite Institution(s)	Cult/Symbolic Appropriation	Diplomatic Correspondence	Retrospection ?	Sources (CTH)
HAPALLA																						
Old Hittite																						
Middle Hittite																						
Tudhaliya I(II)		✓ ?					✓															142
Arnuwanda I				✓																		147
Empire																						
Suppiluliuma I							✓															40, 67
Mursili II			✓				✓				✓			✓								61, 67
Muwatalli II											✓											76

Source: Goetze (1933); Güterbock (1956); Garstang and Gurney (1959, 20-22); Heinhold-Krahmer (1977); Bryce (1998); Klengel (1999)

Table 11: Hittite and local strategies in Region E

Hittite King	Enemy Attack	Repeated Attacks	Rebellion/Breach of Oath	Loyalty to Hittite King	Symbolic Appropriation	Hittite Campaign	Repeated Campaign	Fortifications/Garrisons	Resettlement	Deportation	Instructions for Interaction	Oaths/Agreements	Parity Treaty	Vassal Treaty/Appointment	Dynastic Marriage	Tribute/Tax/Troops	Tribute/Tax Reductions	Hittite Institution(s)	Cult/Symbolic Appropriation	Diplomatic Correspondence	Retrospection ?	Sources (CTH)
Old Hittite																						
Middle Hittite																						
Empire																						
Muwatalli II																		✓			✓	81
Hattusili III																						96, 97
Hattusili III or Tudhaliya IV														✓			✓					106
Tudhaliya IV					✓									✓			✓		✓			Bo86/299 (Bronze Tablet)
Suppiluliuma II						✓													✓			*Südburg*

Sources: Garstang and Gurney (1959); Bryce (1992, 1998); Hawkins (1995, 1998); Van den Hout (1995); Klengel (1999)

Table 12: Hittite and local strategies in Region F

Hittite King	Enemy Attack	Repeated Attacks	Rebellion/Breach of Oath	Loyalty to Hittite King	Symbolic Appropriation	Hittite Campaign	Repeated Campaign	Fortifications/Garrisons	Resettlement	Deportation	Instructions for Interaction	Oaths/Agreements	Parity Treaty	Vassal Treaty/Appointment	Dynastic Marriage	Tribute/Tax/Troops	Tribute/Tax Reductions	Hittite Institution(s)	Cult/Symbolic Appropriation	Diplomatic Correspondence	Retrospection ?	Sources (CTH)
Old Hittite																						
Ammuna			✓																		✓	19
Telipinu													✓	?								21
Middle Hittite																						
Tahurwaili													✓									23b
Zidanta II													✓									25
Huzziya II (?)													✓	?								26*
Tudhaliya I(II)														✓								41, 131**
Empire																						
Suppiluliuma I																		✓	✓			44
Mursili II																			✓			61
Muwatalli																						other
Hattusili III																✓		✓				81, 173***

Sources: Goetze (1940; 1933); Otten (1951; 1981); Garstang and Gurney (1959); Hoffmann (1984); Bryce (1986; 1998); Yoshida and Kammenhuber (1995); Klengel (1999)

** Insecure dating, Klengel (1999, 98) suggests Huzziya II; Bryce (1986, 95) would date the treaty to Hattuslili II, others have suggesed Hantili II.*

*** Insecure dating, Klengel (1999, 106) dates this treaty to Tudhaliya I(II); Yoshida and Kammenhuber (1995) suggest Tudhaliya II; and Bryce (1986, 96) Suppiluliuma I as treaty partner of Sunassura;*

****Insecure dating, either Hattusili III or Mursili III (Klengel 1999, 245).*

Table 13: Hittite and local strategies in Region G2

Hittite King	Enemy Attack	Repeated Attacks	Rebellion/Breach of Oath	Loyalty to Hittite King	Symbolic Appropriation	Hittite Campaign	Repeated Campaign	Fortifications/Garrisons	Resettlement	Deportation	Instructions for Interaction	Oaths/Agreements	Parity Treaty	Vassal Treaty/Appointment	Dynastic Marriage	Tribute/Tax/Troops	Tribute/Tax Reductions	Hittite Institution(s)	Cult/Symbolic Appropriation	Diplomatic Correspondence	Retrospection?	Sources (CTH)
Old Hittite																						
Middle Hittite																						
Tudhaliya I(II)	✓		✓			✓								✓*								41, 131, 142
Arnuwanda I	✓		✓																			164
Tudhaliya II(III)	✓		✓																		✓	51, 188
Empire																						
Suppiluliuma I							✓															51
Hattusili III																						209.7**
Tudhaliya IV														✓						✓		123, KBo XVII4

Sources: Goetze (1940); Garstang and Gurney (1959); Klengel (1968; 1976; 1999); Bryce (1986; 1998)

** Insecure dating, Klengel (1999, 106) places the treaty in the time of Tudhaliya I; Yoshida and Kammenhuber (1995, 110) date it to Tudhaliya II; and Bryce (1986, 94) would date it to the reign of Suppiluliuma I.*

*** Insecure dating, either Hattusili III/Puduhepa or Tudhaliya IV*

Table 14: Hittite and local strategies in Region J1

Hittite King	Enemy Attack	Repeated Attacks	Rebellion/Breach of Oath	Loyalty to Hittite King	Symbolic Appropriation	Hittite Campaign	Repeated Campaign	Fortifications/Garrisons	Resettlement	Deportation	Instructions for Interaction	Oaths/Agreements	Parity Treaty	Vassal Treaty/Appointment	Dynastic Marriage	Tribute/Tax/Troops	Tribute/Tax/Territorial Reductions	Hittite Institution(s)	Cult/Symbolic Appropriation	Diplomatic Correspondence	Retrospection?	Sources (CTH)
Old Hittite																						
Hattusili I							✓															4
Middle Hittite																						
Empire																						
Suppiluliuma I		✓	✓				✓							✓		✓	✓			✓	✓	40, 45, 49, 50, 51, 61, 62, 75, RS 17. 227*; 17.132; EA 157, 170
Mursili II			✓			✓						✓		✓		✓	✓			✓	✓	61, 62, 63, 64, 65, 66, 92 RS 17.237,
Muwatalli II																✓*				✓	✓	92, 105; RS 20.33
Hattusili III											✓			✓	✓	✓				✓		92, 93, 94, 193, 209.2, KUB XXI 38
Tudhaliya IV														✓		✓	✓			✓		105, 111 RS 17.35, 17.159; 18.06+ 117.365 Assyrian Letter RS 43.165
Arnuwanda III															✓							Egyptian Letter RS 88.2158
Suppiluliuma II																✓				✓		RS 34.129, 18.38

Sources: Goetze (1933); Güterbock (1956); Nougayrol (1956); Lackenbacher (1991, 1995); Moran (1992); Beckman (1996); Klengel (1999). For the relations between the Hittite empire and Ugarit see Nougayrol (1956), Beckman (1996).

** Egyptian inscriptions about the battle of Qadesh (Gardiner 1960).*

Table 15: Hittite and local strategies in Region J2

Hittite King	Enemy Attack	Repeated Attacks	Rebellion/Breach of Oath	Loyalty to Hittite King	Symbolic Appropriation	Hittite Campaign	Repeated Campaign	Fortifications/Garrisons	Resettlement	Deportation	Instructions for Interaction	Oaths/Agreements	Parity Treaty	Vassal Treaty/Appointment	Dynastic Marriage	Tribute/Tax/Troops	Tribute/Tax/Territorial Reductions	Hittite Institution(s)	Cult/Symbolic Appropriation	Diplomatic Correspondence	Retrospection?	Sources (CTH)
Old Hittite																						
Hattusili I							✓															4, 14 and 15*, 6
Mursili I						✓															✓	14.5*, 19
Middle Hittite																						
Tudhaliya I							✓					✓									✓	75
Empire																						
Suppiluliuma I		✓					✓			✓				✓		✓	✓	✓	✓	✓	✓	40, 51, 53, 61
Mursili II			✓				✓			✓				✓		✓	✓				✓	61, 63, 75
Muwatalli II							✓									✓***			✓		✓	75, 156, 525
Hattusili III***																						
Tudhaliya IV																			✓			569

Sources: Goetze (1933); Güterbock (1956); Hoffmann (1984); Klengel (1999);
** Insecure dating, either Hattusili I or Mursili I (Klengel 1999, 40)*
*** Hattusili III exiles Urhi-Tesub to Nuhasse (Klengel 1999, 231)*
**** Egyptian inscriptions about the battle of Qadesh (Gardiner 1960).*

Table 16: Hittite and local strategies in Region J3

Hittite King	Enemy Attack	Repeated Attacks	Rebellion/Breach of Oath	Loyalty to Hittite King	Symbolic Appropriation	Hittite Campaign	Repeated Campaign	Fortifications/Garrisons	Resettlement	Deportation	Instructions for Interaction	Territorial Reduction	Territorial Gains	Oaths/Agreements	Vassal Treaty/Appointment	Dynastic Marriage	Tribute/Tax/Troops	Tribute/Tax Reductions	Hittite Institution(s)	Cult/Symbolic Appropriation	Diplomatic Correspondence	Retrospection?	Sources (CTH)
Old Hittite																							
Hantili			?																			✓	19
Middle Hittite																							
Tudhaliya I(II)														✓									KUB LVII 18
Hattusili II?													✓										75
Empire																							
Suppiluliuma I												✓											51
Mursili II								✓							✓					✓			61, Meskene 73.1097
general					✓												✓		✓		✓		Beckman 1995b

Sources: Goetze (1933); Hoffmann (1984); Beckman (1995b); Klengel (1999)

Table 17: Distribution of administrative bodies in Region A

Hittite Toponym	Capital of "Land"	Cult Centre	Palace	AGRIG and Storehouses	Empire Palace	BEL MADGALTI
Nenassa	✓		✓	✓		
Hupisna	✓		✓	✓		
Sukziya	✓		✓	✓		
Tuwanuwa	✓		✓	✓		
Karahna		✓	✓	✓	✓	
Kastama			✓	✓	✓	
Takiputta			✓	✓		
Ortaköy-Sapinuwa			✓		✓	
Kassiya			✓		✓	
Sulupas(s)i			✓		✓	
Hariyasa			✓		✓	
Gazzimar(a)/ Kiz(zi)mara			✓		✓	
Maşat-Tapikka						✓

Source: Siegelová (2001)

Table 18: Anatolian sites and their suggested Hittite names

Site	Hittite Toponym	Identification
Boğazköy	Hattusa	definite
Alaca Höyük	Arinna	uncertain
İnandık Tepe	Hanhana	disputed
Alişar Höyük	Ankuwa	possible
Maşat Höyük	Tapikka	very likely
Ortaköy	Sapinuwa	very likely
Kuşaklı (Sivas)	Sarissa	very likely
Gözlü-Kule-Tarsus	Tarsa	very likely
Troy	Wilusa	possible
Miletus	Millawanda	possible
Ephesus	Apasa	possible

Sources: Alp (1991); Gorny (1997); Imparati (2002); Süel (2002); Müller-Karpe (2002a)

Figure 4: Ortaköy-Sapinuwa Building A (Süel 2002, Fig. 4)

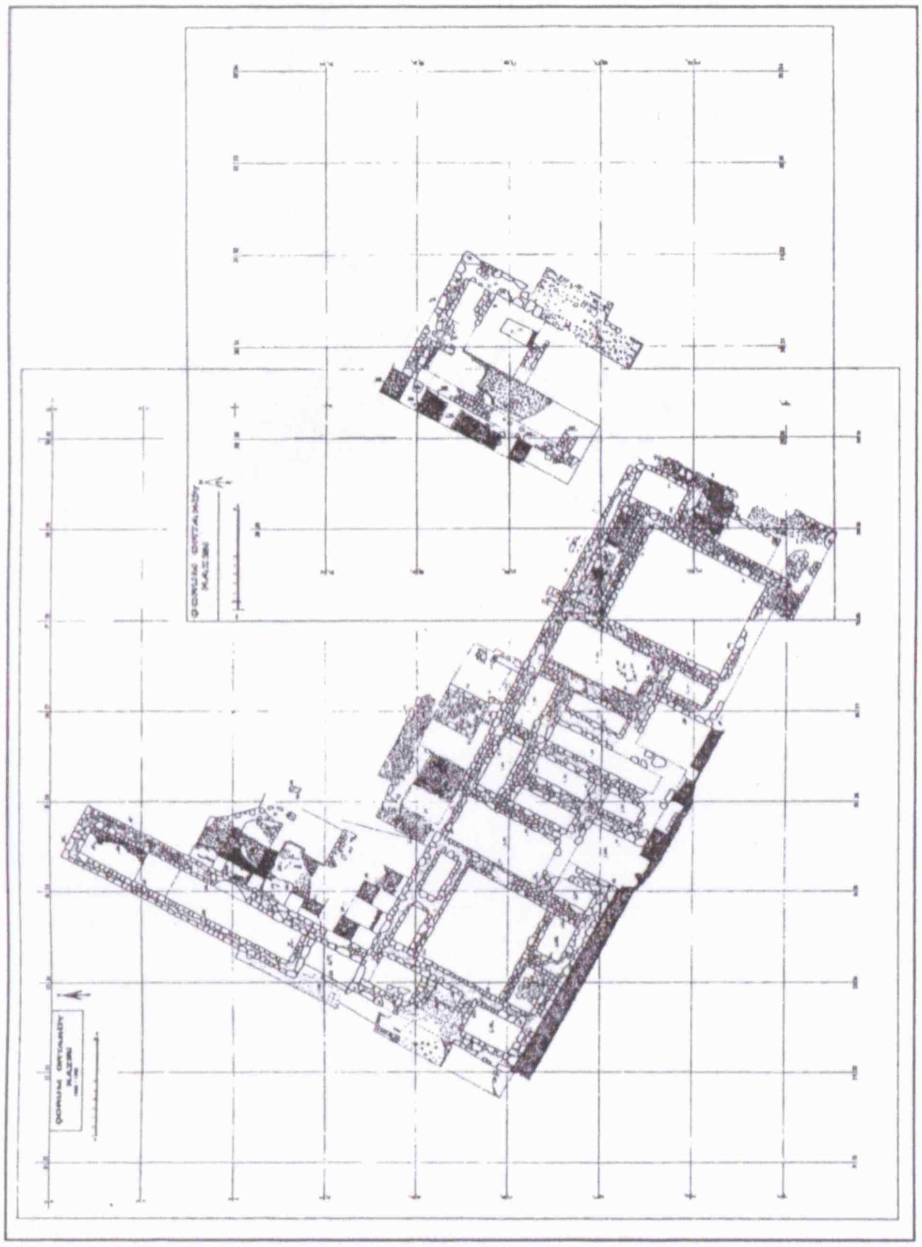


Fig. 4. Building A plan (Cengiz Erol).

Figure 5: Ortaköy-Sapinuwa Building B (Süel 2002, Fig. 5)

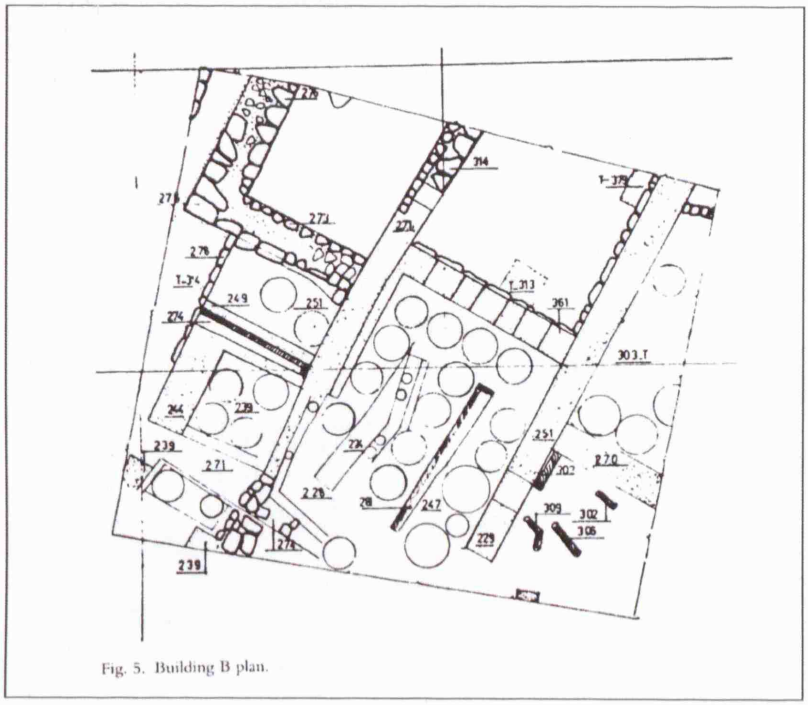


Fig. 5. Building B plan.

Figure 6: Maşat-Tapikka Level III monumental structure (Özgüç 1982, Plan 4)

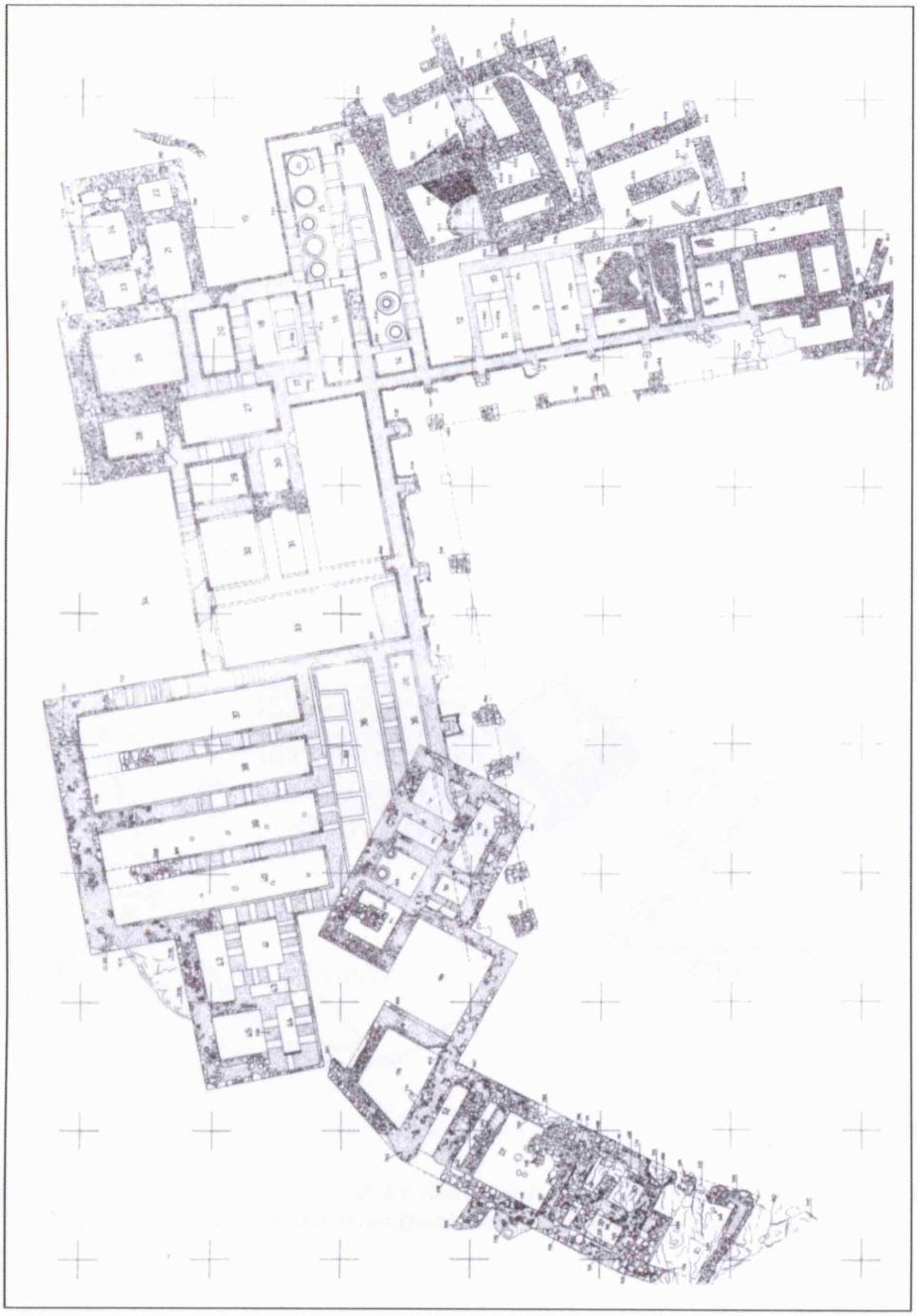


Figure 7: Kuşaklı-Sarissa (Mielke 2006b, 267 Abb.5)

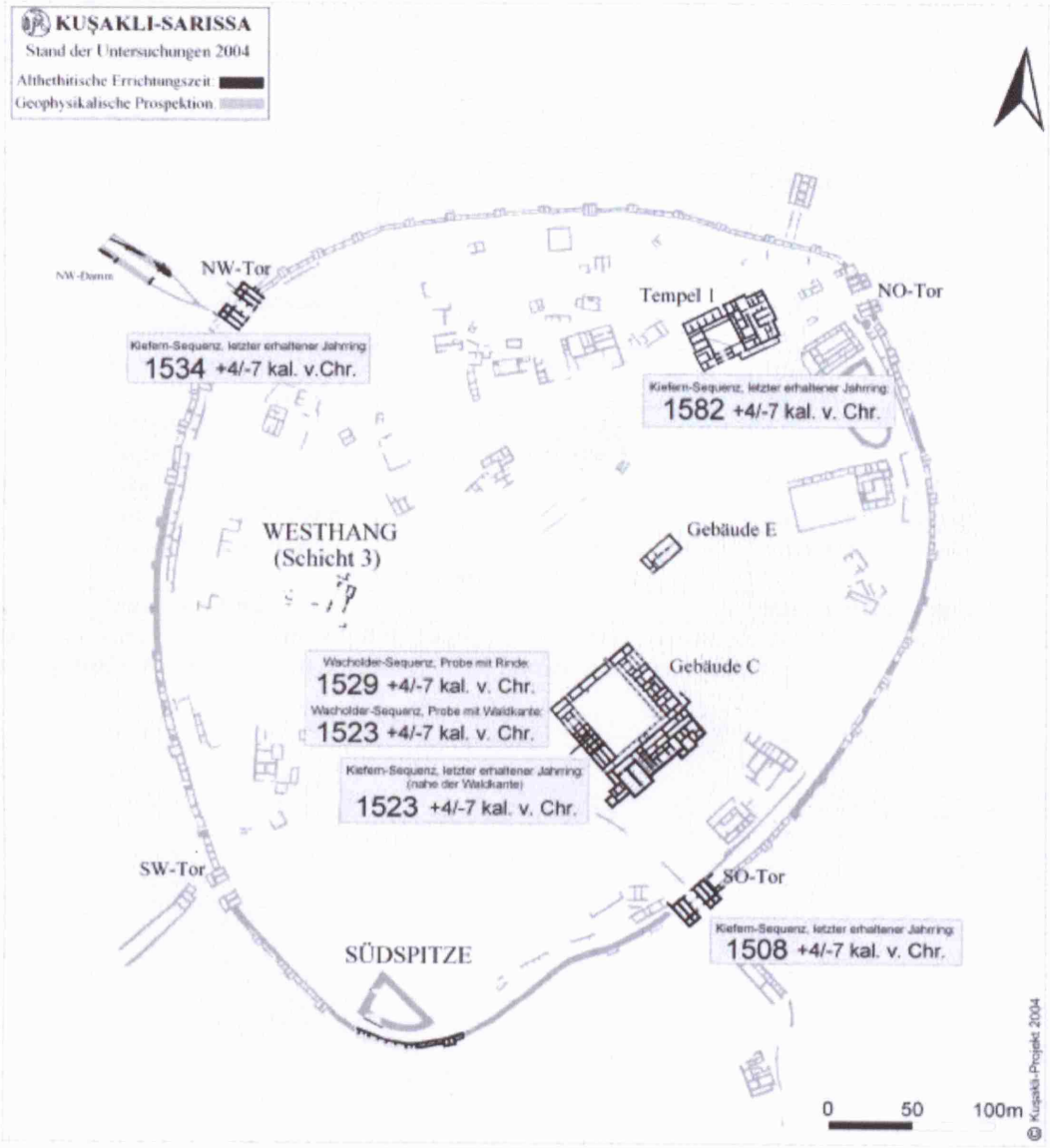


Abb. 5: *Plan von Kusakli-Sarissa mit den Bauresten aus der althethitischen Errichtungszeit. Zusätzlich sind die Ergebnisse der Dendrodatierung zu den Gebäuden angegeben.*

Table 19: Size ranges of major excavated sites in Anatolia and north Syria

Region	Site	Approximate Size (ha)	Function
A1	Boğazköy-Hattusa	180	imperial capital
	Alaca Höyük	6.7	cult centre
	Alişar Höyük	18	
A2	Ortaköy-Sapinuwa	900 (Süel 2002) 8.5 (Gates 1996)	local palace
	Maşat-Tapikka	7.9* (Özgüç 1978) 15-16 (Ökse 2000a)	BEL MADGALTI
	Kuşaklı-Sarissa	18.2 (intramural)	cult centre
D	Beycesultan	17-19	regional centre (?)
	Troy	33 (?)	regional centre (?)
E	Yumuktepe-Mersin	5	regional centre (?)
	Gözlu Kule-Tarsus	7	regional centre
G2	Arslantepe	5	regional centre
	Korucutepe	2.6 (1.3 LBA scatter)	regional centre / vassal?
	Norşuntepe	16 (8.2 LBA scatter)	
	Tepecik	5.3 (3.4 LBA scatter)	
H	Tille Höyük	2.4	fortified outpost (?)
J1	Tell Atchana-Alalakh	10	vassal ruler/capital
	Ras Shamra-Ugarit	26.4 (Laroze and Rieth 2004) 20 (Garr 1987)	vassal ruler/capital
J3	Meskene-Emar		vassal ruler / capital

Sources: Özgüç (1978); Garr (1987); Frangipane (1993); Müller-Karpe (1995); Gorny (1995a); Gates (1996); Korfmann (2001); Süel (2002); Laroze and Pieth (2004)

Map 6: Suggested LBA settlement pattern in Sivas province (modified after Ökse 2000a Abb. 14)

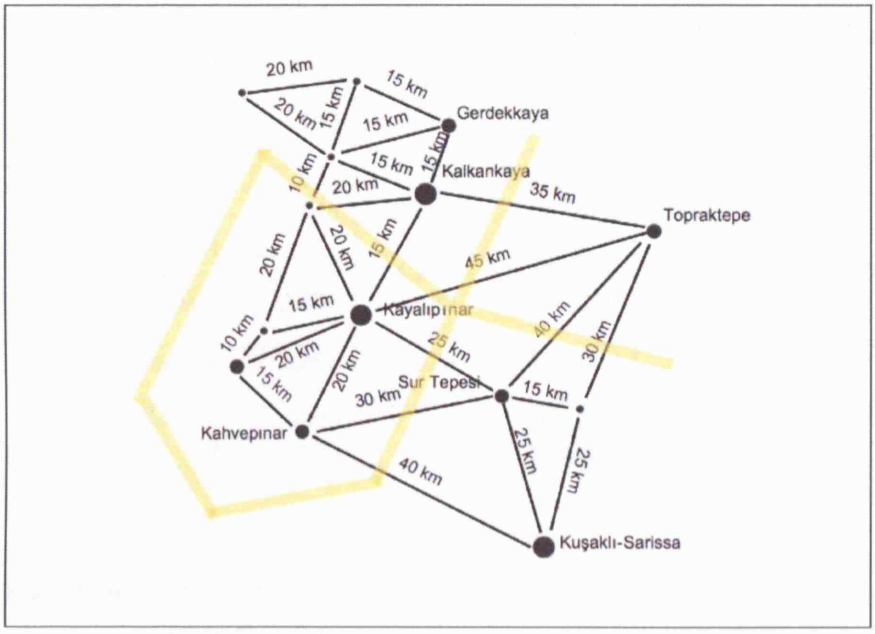


Figure 8: Distribution of agricultural resources and hierarchy of exploitation

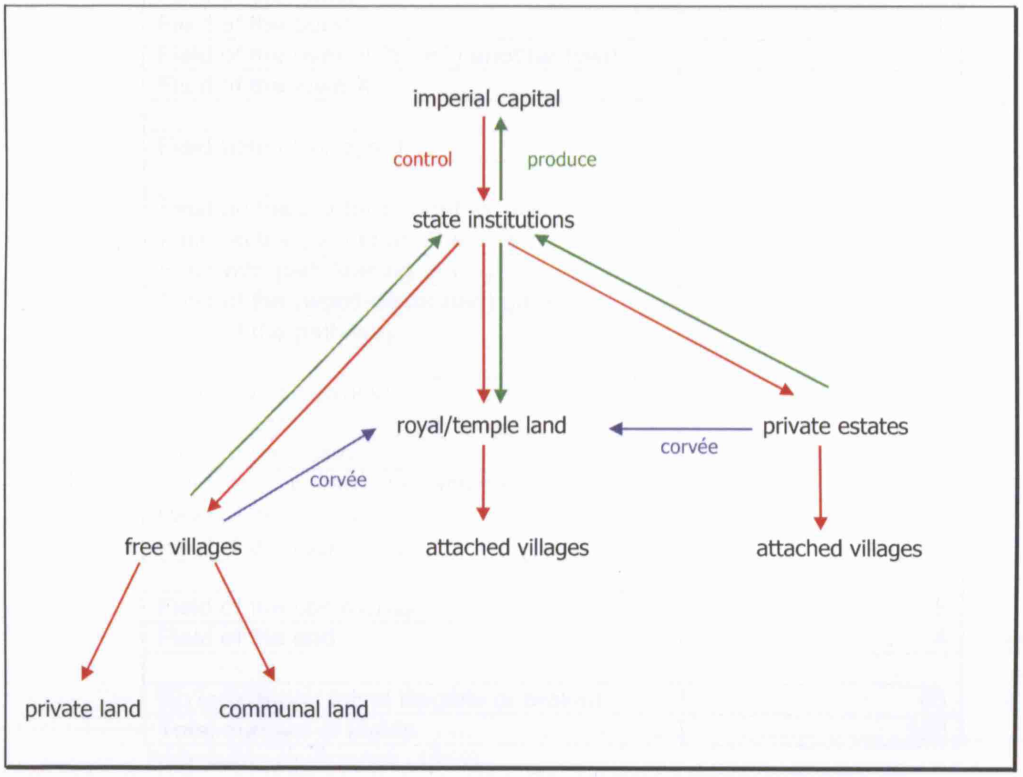


Table 20: LBA grain silos on the central plateau

Site	Silo Type	Volume (m^3)	Tons	Daily rations (500g p/p)	Persons fed per year	Land req. (400kg/ha)
Boğazköy-Hattusa	Lower Büyükkaya	128 192	76.8 115.2	154,000 230,000	420 630	192 288
	Middle Büyükkaya (Grube 8)	432 648	260 388.8	520,000 777,600	1,424 2,130	650 971
	silo behind posternwall	7,000 9,800	4,200 5,880	8,400,000 11,760,000	23,000 32,000	10,500 14,700
Kuşaklı-Sarissa	D-shaped silo	1,200	720	1,440,000	3,945	1,800
Kaman-Kalehöyük	large silo	~300 ~400	180 240	360,000 480,000	989 1,315	450 600

Source: Mielke (2001, 241)

Table 21: Field types and locations according to Hittite cadastral texts

Field Type / Location	Number of Mentions
Interior of river (?)	3
Field of the river	13
Field of the river bank	1
Field of the canal	1
Field of the pond	1
Field of the river of (from?) another town	1
Field of the town X	1
Field behind vineyard	1
Field on the border to another town	7
Field on the path to another town	10
Field with path leading through	1
Field of the (wood-decorated) gate	3
Field of the path/way	1
Property of meadow	3
Barren land	1
Field of the valley	1
Field down towards (a settlement)	1
Field of the mountain	5
Field of the rock	1
Field of the community	5
Field of the god	4
No indication / tablet illegible or broken	85
Total number of Fields	150

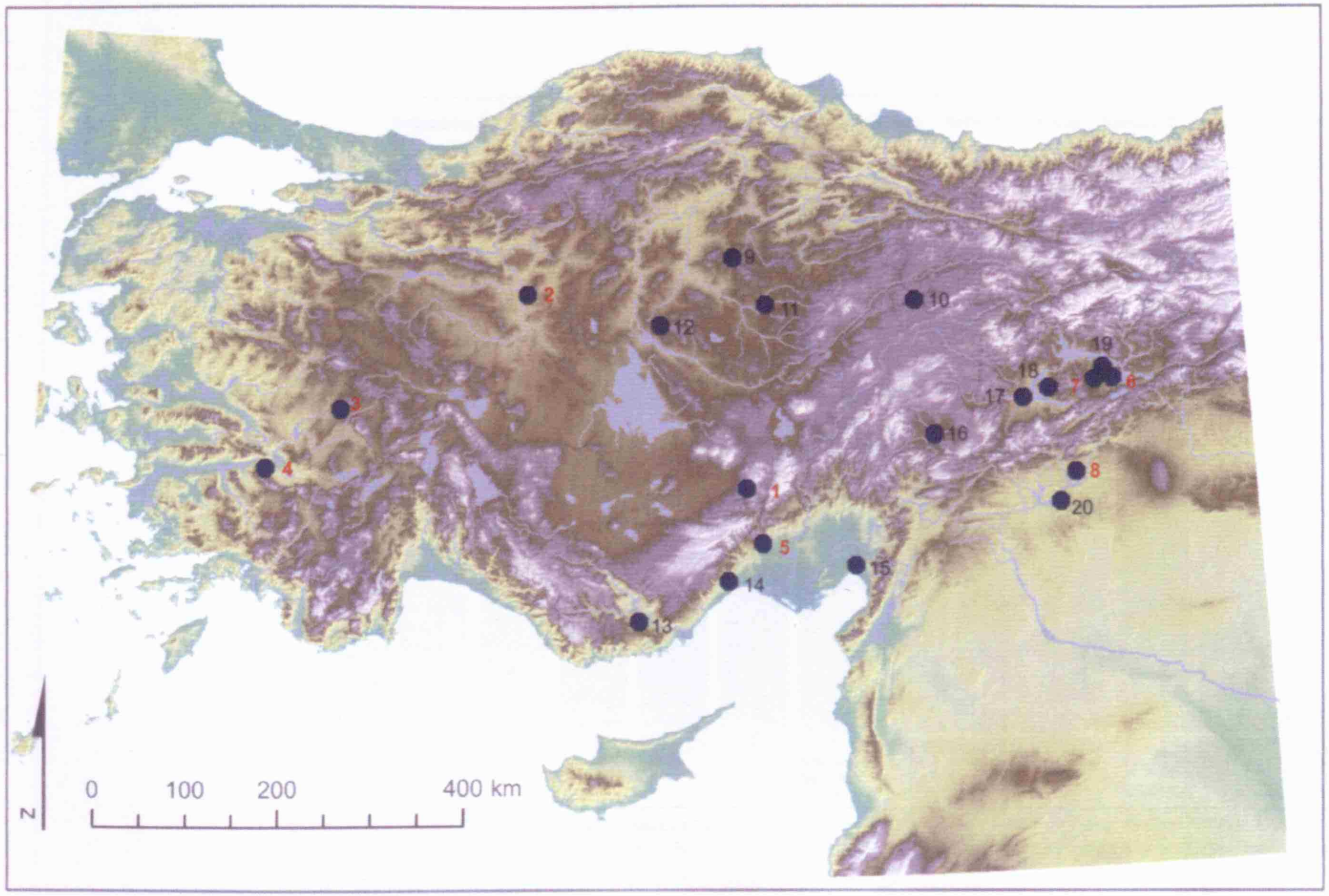
Translation by Souček (1959)

Table 22: Captives deported to the imperial core area

Number of People	Country	Hittite King	Text
66,000	Arzawa	Mursili II	Year 5, Annals Mursili
15,500	Arzawa	Mursili II	Year 3, Annals Mursili
7,000		Hattusili III	Taw. = KUB 14.3 iii 10
4,000	Hattians from Seha River Land	Mursili II	Year 4, Annals Mursili
3,330	Carchemish	Suppiluliuma I	DS fragm. 28 iii 42-43
3,000	Azzi, Dukkama	Mursili II	Year 10, Annals Mursili
1,000	Hattians from Azzi	Mursili II	Year 11, Annals Mursili

Source: Hoffner (2002, 61)

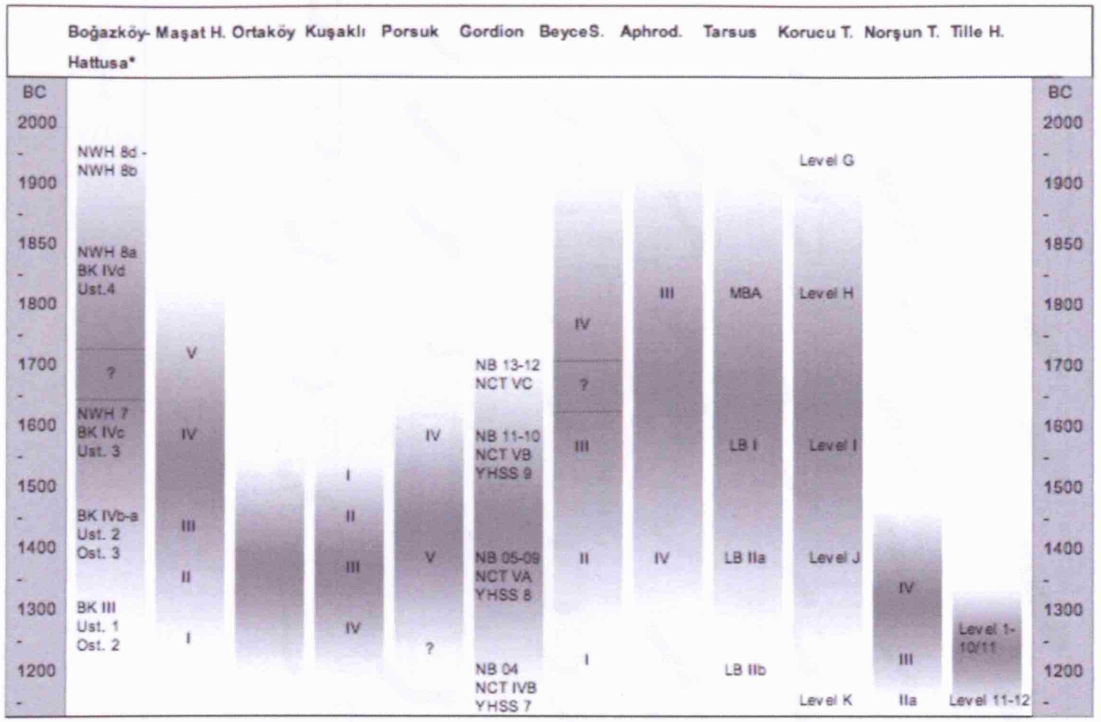
Map 7: Sites mentioned in the ceramic analysis



1 Porsuk
2 Gordion
3 Beycesultan
4 Aphrodisias
5 Gözlu Kule-Tarsus
6 Korucutepe
7 Norşuntepe
8 Tille Höyük
9 Boğazköy-Hattusa
10 Kuşaklı-Sarissa
11 Çadır Höyük
12 Kaman-Kalehöyük
13 Kilise Tepe
14 Yumuktepe-Mersin
15 Kinet Höyük
16 Karahöyük-Elbistan
17 Arslantepe
18 İmikuşağı
19 Tepecik
20 Lidar Höyük

Sites included in the ceramic analysis are marked in red.

Figure 9: Chronological spans of selected excavated sites

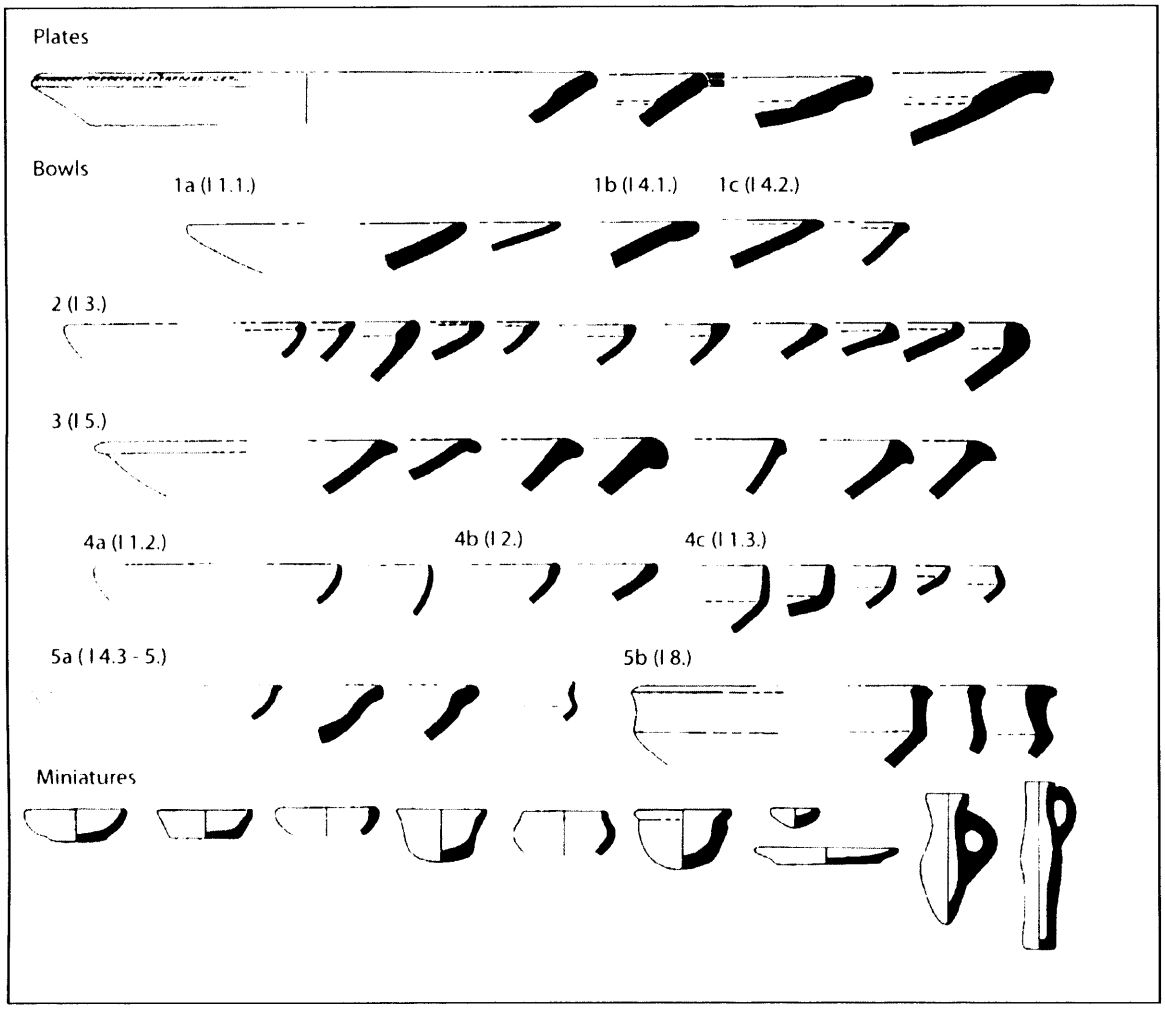


Sources: Goldman (1956); Lloyd (1972); Marchese (1976); Van Loon (1978, Table 1); Dupré (1983); Korbel (1985); Joukowsky (1986); Pelon (1992); Gunter (1991, Table 2); Henrickson (1993); Summers (1993, 30); Mellaart and Murray (1995); Müller-Karpe (2003); Mielke (2006a)

* The chronology of the capital city is currently under review (see Appendix 1).

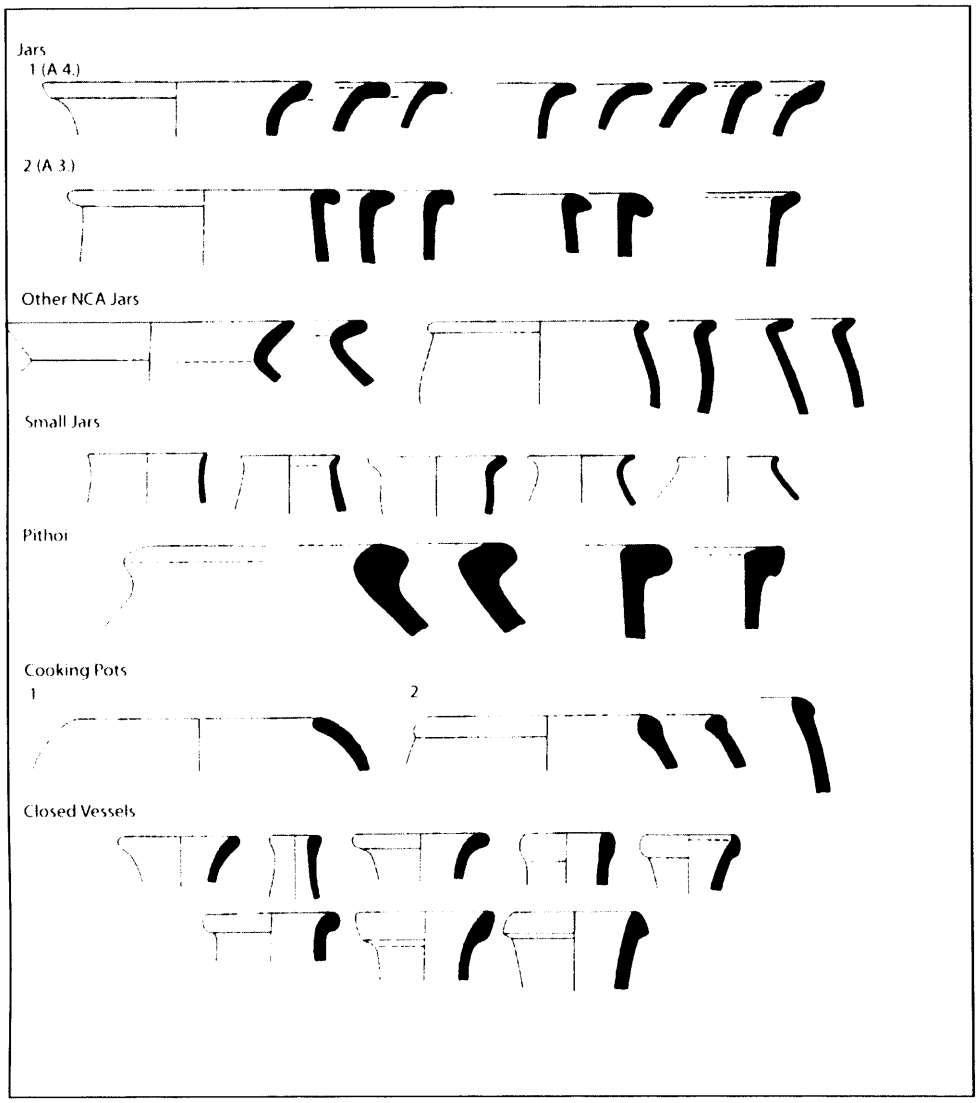
Figure 10: Typology of NCA pottery (modified after Parzinger and Sanz 1992)

(1)



N.B. Illustrations not to scale

(2)



MB Illustrations not to scale

Table 23: Excavation areas and sherd/vessel counts

Site	Sherds	Diagn.	Database	Excavation	Area (m^2)	Date
Gordion	7000	ca. 30 % (= 2100)	300	NCT Megaron 10	30 105 = 135	1950 – 1973 (ongoing)
Beycesultan	-	-	604	East Summit Area A Area R	2550 400 300 = 3250	1954-1959
Aphrodisias	6609	ca. 49%	206	Acropolis - Trench 8	80	1966 - 1974
Porsuk	-	-	203	Chantier 2 Chantier 4	600 400 = 1000	1969 – 1977 (1986 - ongoing)
Tarsus	-	-	778			1934 - 1939 /1947 - 1948
Korucutepe	-	-	2996	Phase I Phase J	425 395 = 820	1968 - 1970
Tille Höyük	-	-	263	North-West A. Trench 7660	150 100 = 250	1978 - 1990
Norşuntepe	-	ca. 4500	1273		3350	1968 - 1974
Total	-	-	6623	-		-

Sources: Melikoff and Murray 1995, Summers 1993, Gunter 1991, Jankowsky 1986, Korbel 1985, Dupre 1983, Griffin 1980, Van Loon 1978, Marchese 1976, Lloyd 1972, Goldman 1956

NB: Sizes of excavation areas were calculated approximately from excavation plans in most cases.

Figure 11: Overlapping chronological divisions

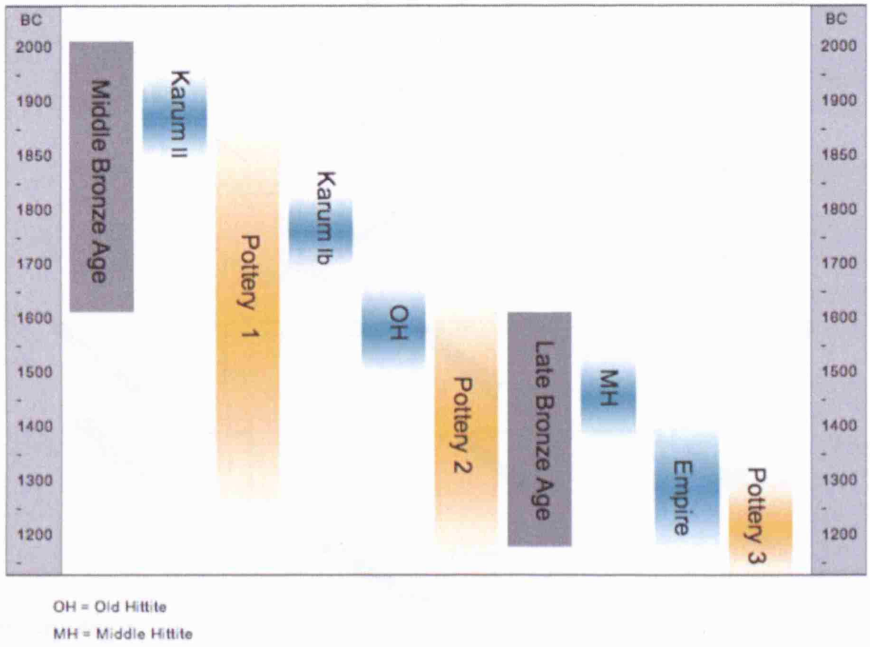
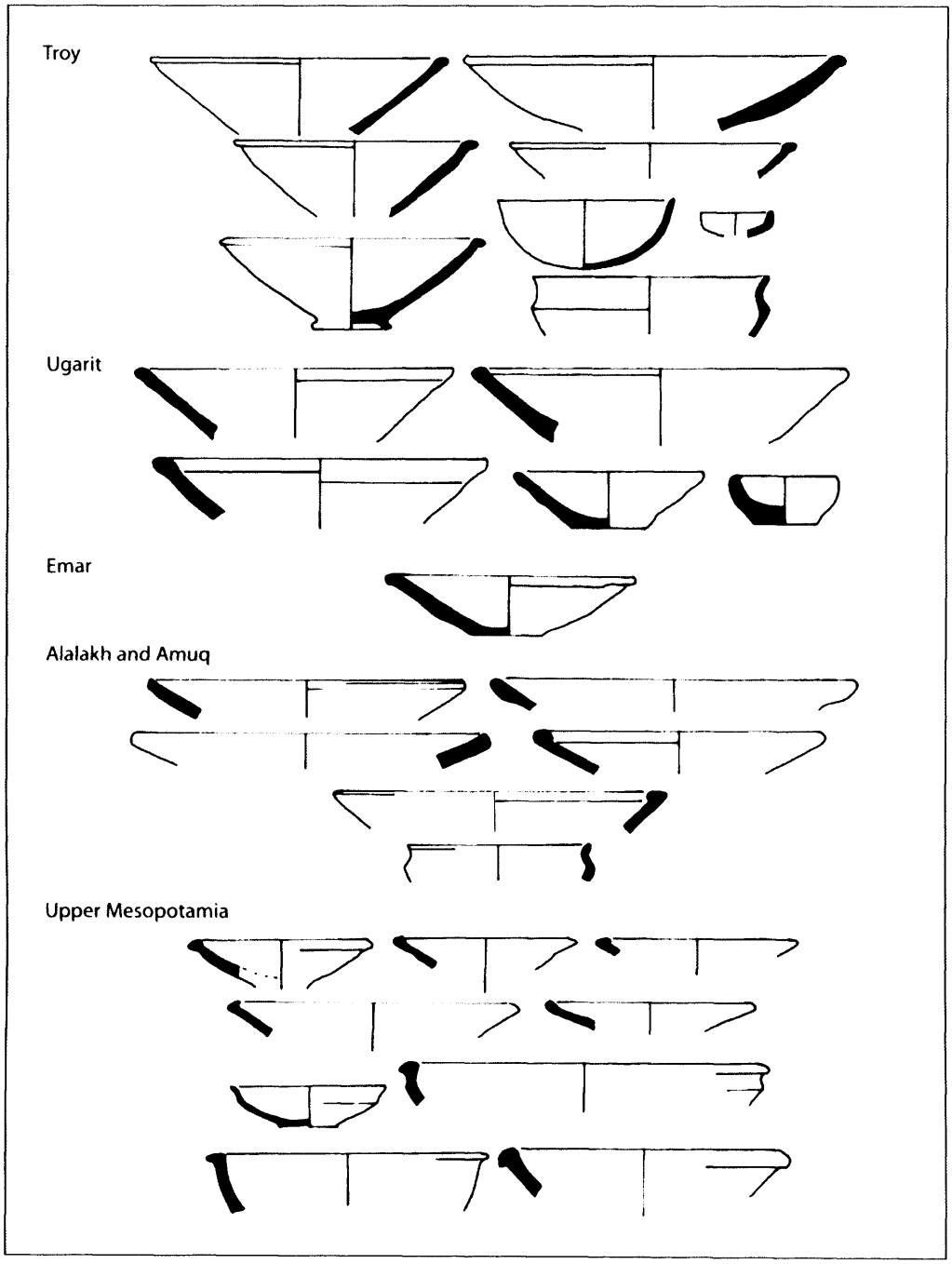


Table 24: Excavated sites with reported NCA ceramic traits

Region	Site	Publication
A3	Porsuk	Dupré (1983)
C1	Gordion	Gunter (1991); Henrickson (1993, 2002); Gunter (2006)
	Şarhöyük-Dorylaion	Darga and Starke (2003)
D	Aphrodisias	Marchese (1976); Joukowsky (1986); Gates (2001)
	Beycesultan	Mellaart and Murray (1995)
E	Kilise Tepe	Postgate (1998); Symington (2001); Helsing and Postgate (in print)
F	Yumuktepe-Mersin	Garstang (1953); Sevin and Köroğlu (2004); Jean (2006)
	Gözlu Kule-Tarsus	Goldman (1956); Symington (1986); Slane (1987); Korbel (1987)
	Kinet Höyük	Gates (2001, 2006)
G1	Karahöyük-Elbistan	Özgüç and Özgüç (1948); Parzinger and Sanz (1992)
	Fıraktın	Özgüç (1955)
G2	İmikuşağı	Konyar (2002, 2006)
	Arslantepe	Pecorella (1975)
	Korucutepe	Griffin (1980); Umurtak (1996)
	Norşuntepe	Korbel (1985)
	Tepecik	Esin (1970-1981)
H	Tille Höyük	Summers (1993)
	Lidar Höyük	Müller (2005)

Figure 12: Similar bowl types from other contemporary traditions



N.B.: Illustrations not to scale.

Sources: modified after Koppenhöfer (2002, Abb. 10-13), Yon (1987, Figure 8 and 21), Caubet (1982, Nr. 3), Casana and Gansell (2005, Figure 6.3c), Yener 2005a (Appendix 1, Figure A 12), modified after Pfälzner (1995, Tafel 2, 16, 67 and 100)

Table 25: Summary of NCA ceramic traits at surrounding sites

Site	Plates		Bowls		Miniatures		Jars		Cooking Pots		Closed Vessels		other*	Total
	NCA	diff.	NCA	diff.	NCA	diff.	NCA	diff.	NCA	diff.	NCA	diff.		
Region A														
Porsuk V (total)	11	-	92	3	-	-	23	7(?)	45	-	3	3	16	203
pièce hittite (K2)	4	-	45	1	-	-	14	4	30	-	-	-	4	102
Region C														
Gordion MBA-LBA	-	-	25	-	-	-	2	3	3	-	2	1	8	44
Gordion LBA I	-	-	38	2	-	-	13	2	8	1	1	2	9	76
Gordion LBA II	5	-	52	5	1	-	24 (1 Pithos)	4	9	-	6	3	24	133
Gordion EIA	-	-	26	-	-	-	5 (1 Pithos)	7	3	-	2	-	4	47
Region D														
Beycesultan III	-	-	25	21	-	-	-	5	-	-	-	26	50	127
Beycesultan II	1?	-	45	20	1	-	-	11	-	3	-	29	128	238
Beycesultan I	2	1?	86	42	-	-	5	14	-	5	8	19	57	239
Aphrodisias	-	-	39	32	-	-	11 (8 Pithoi)	23 (8 Pithoi)	2(?)	10	5	19	65	206
Region F														
Tarsus LB I	-	-	26	9	-	-	9 (2 Pithoi)	26 (2 Pithoi)	-	3	2(?)	32	40	147
Tarsus LB II	2	-	24	7	19	1	13 (2 Pithoi)	23 (1 Pithos)	-	2	2	23	15	131
Korbel (1987)	6	1	220	55	11	-	13	118	-	14	2	20	40	499

Site	Plates		Bowls		Miniatures		Jars		Cooking Pots		Closed Vessels		other*	Total
	NCA	diff.	NCA	diff.	NCA	diff.	NCA	diff.	NCA	diff.	NCA	diff.		
Region G														
Korucutepe Phase I	89	1(?)	556	172	2	-	113 (10 Pithoi)	539 (18 Pithoi)	27	16	52	5	30	1652
Korucutepe Phase J (Architectural Stage)	10	5	434	47	11	-	20 (6 Pithoi)	135 (5 Pithoi)	32	2	11	5	9	721
Korucutepe Phase J (Architectural Stage)	8	-	364	14	6	-	24 (3 Pithoi)	72 (6 Pithoi)	87	4	13	13	18	623
Norşuntepe (total)	6	1	346	165	3	-	193 (7 Pithoi)	334 (40 Pithoi)	72	69	16	32	37	1273
Region H														
Tille H. Level 1-5	-	-	10	32	-	-	1	52 (1 Pithos)	-	19	7(?)	8	51	180
Tille H. Level 6-8	-	-	1	2	-	-	1	2	-	-	1(?)	-	1	8
Tille H.Level 9-11	-	-	3	-	-	-	-	-	-	1	1(?)	3	1	9
Tille H. Pre-Burnt Level	-	-	8	1	1	-	1(?)	2	-	-	-	-	-	13
Tille H. Burnt Level	-	-	3(?)	4	-	-	-	-	3	3	5(?)	7	11	53

** The category "other" includes body sherds, bases and unidentifiable rim sherds as well as rare vessels.*

Figure 13: Porsuk vessel shapes with NCA affinities

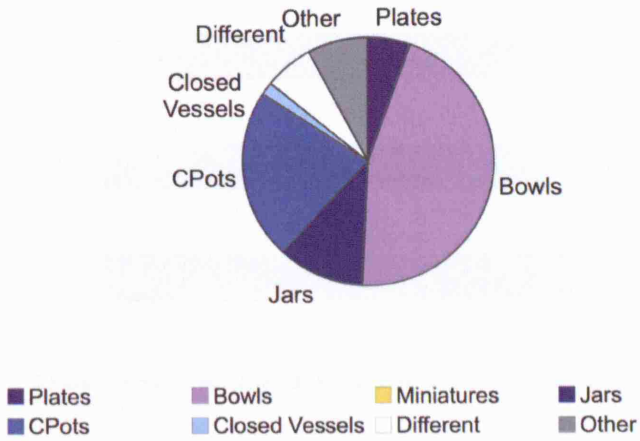


Figure 14: Porsuk bowl shapes with NCA affinities

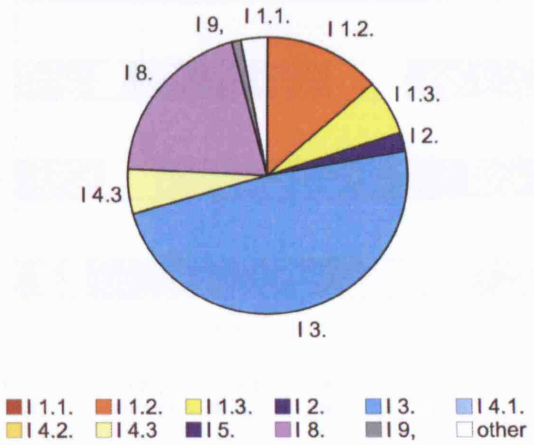


Figure 15: Gordion vessel shapes with NCA affinities

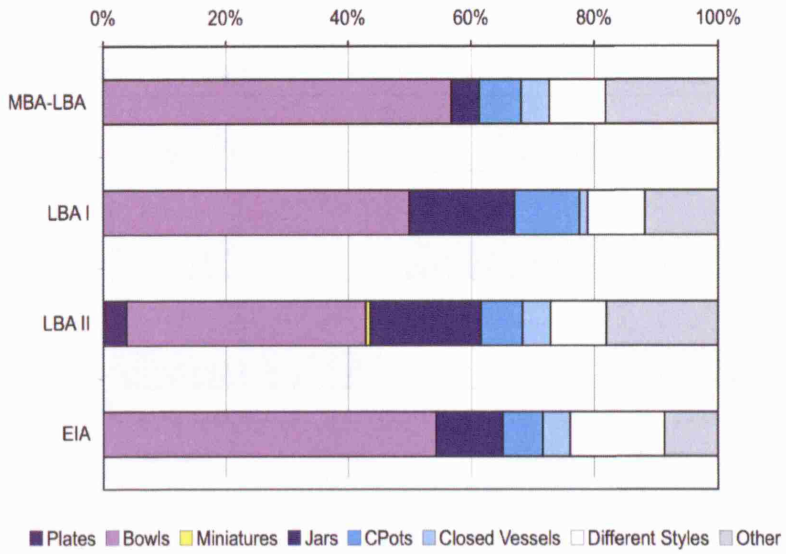


Figure 16: Gordion bowl shapes with NCA affinities

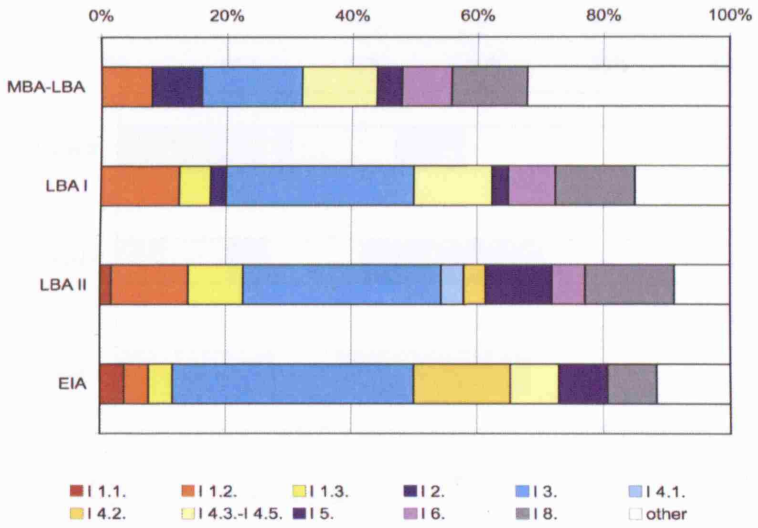


Figure 17: Beycesultan vessel shapes with NCA affinities

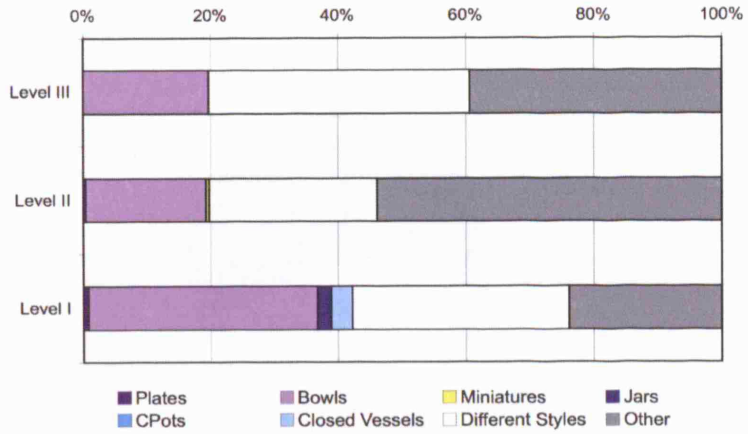


Figure 18: Beycesultan bowl shapes with NCA affinities

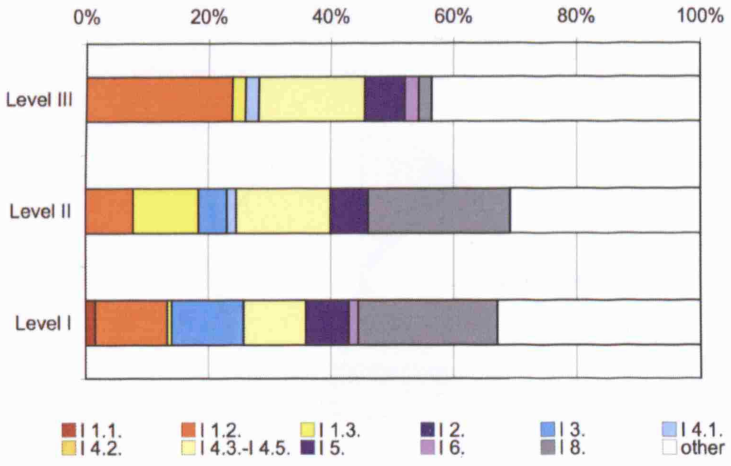


Figure 19: Aphrodisias vessel shapes with NCA affinities

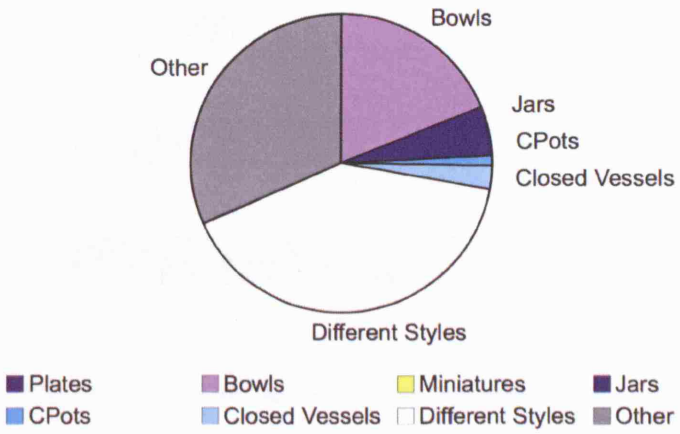


Figure 20: Aphrodisias bowl shapes with NCA affinities

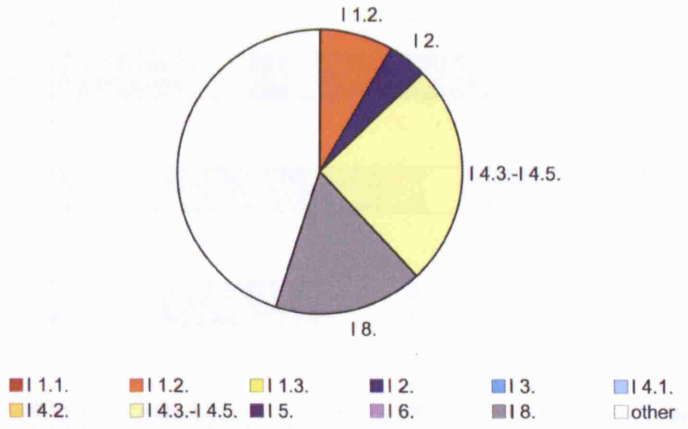


Figure 21: Tarsus vessel shapes with NCA affinities

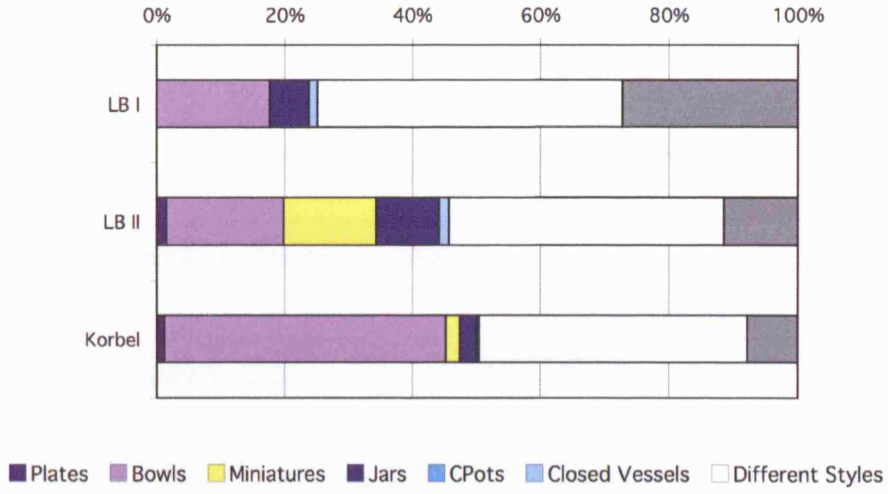


Figure 22: Tarsus bowl shapes with NCA affinities

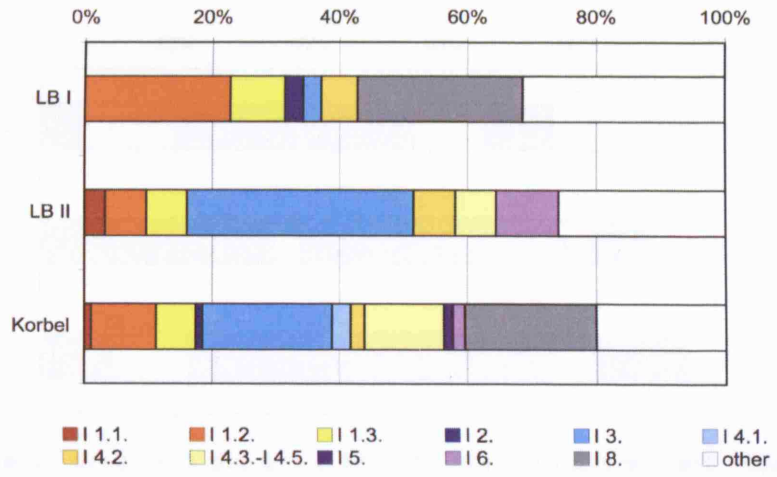


Figure 23: Korucutepe vessel shapes with NCA affinities

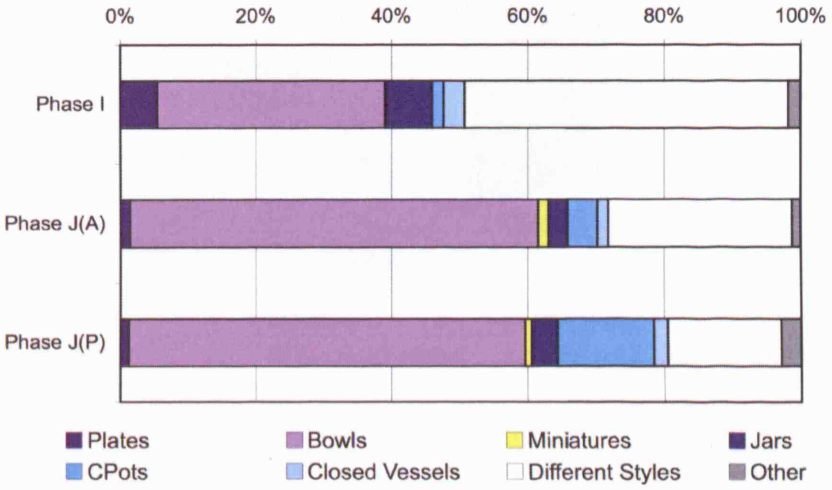


Figure 24: Korucutepe bowl shapes with NCA affinities

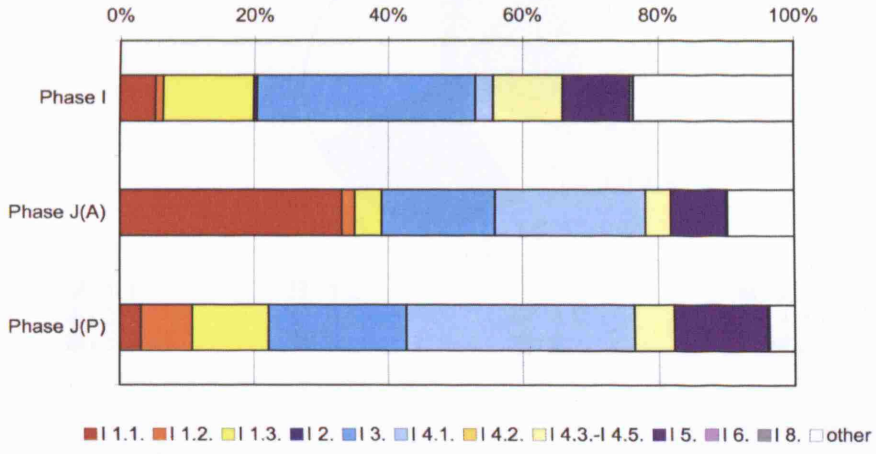


Figure 25: Norşuntepe vessel shapes with NCA affinities

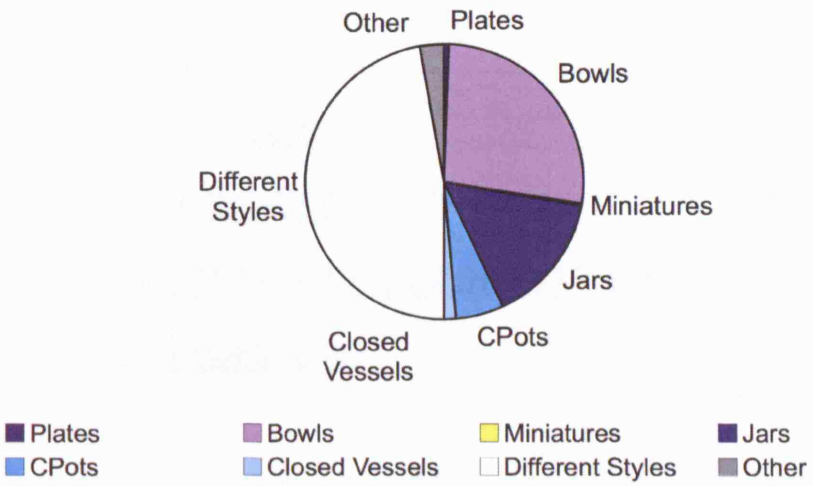


Figure 26: Norşuntepe bowl shapes with NCA affinities

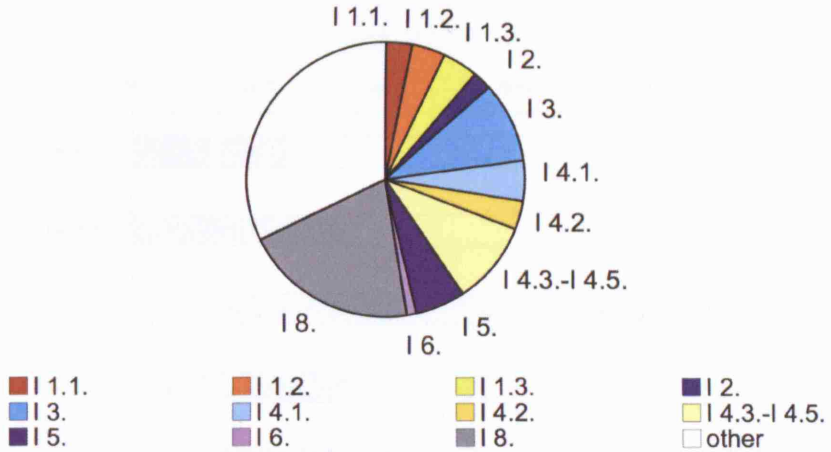


Figure 27: Tille Höyük vessel shapes with NCA affinities

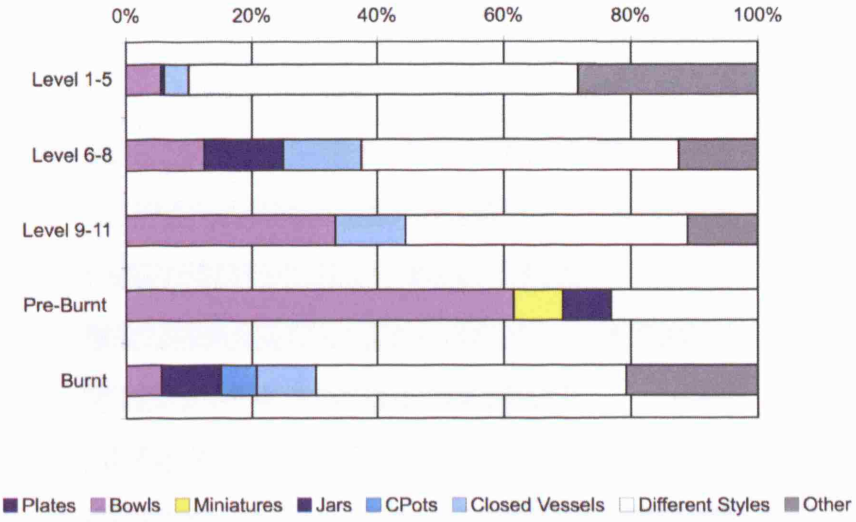


Figure 28: Tille Höyük bowl shapes with NCA affinities

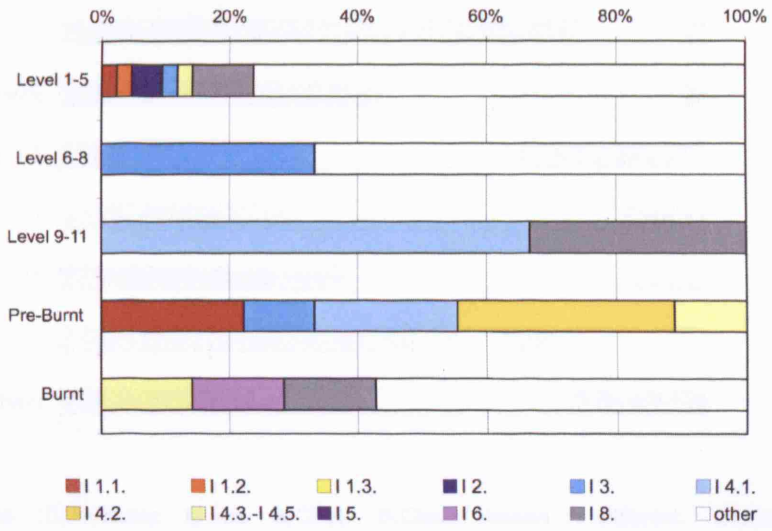
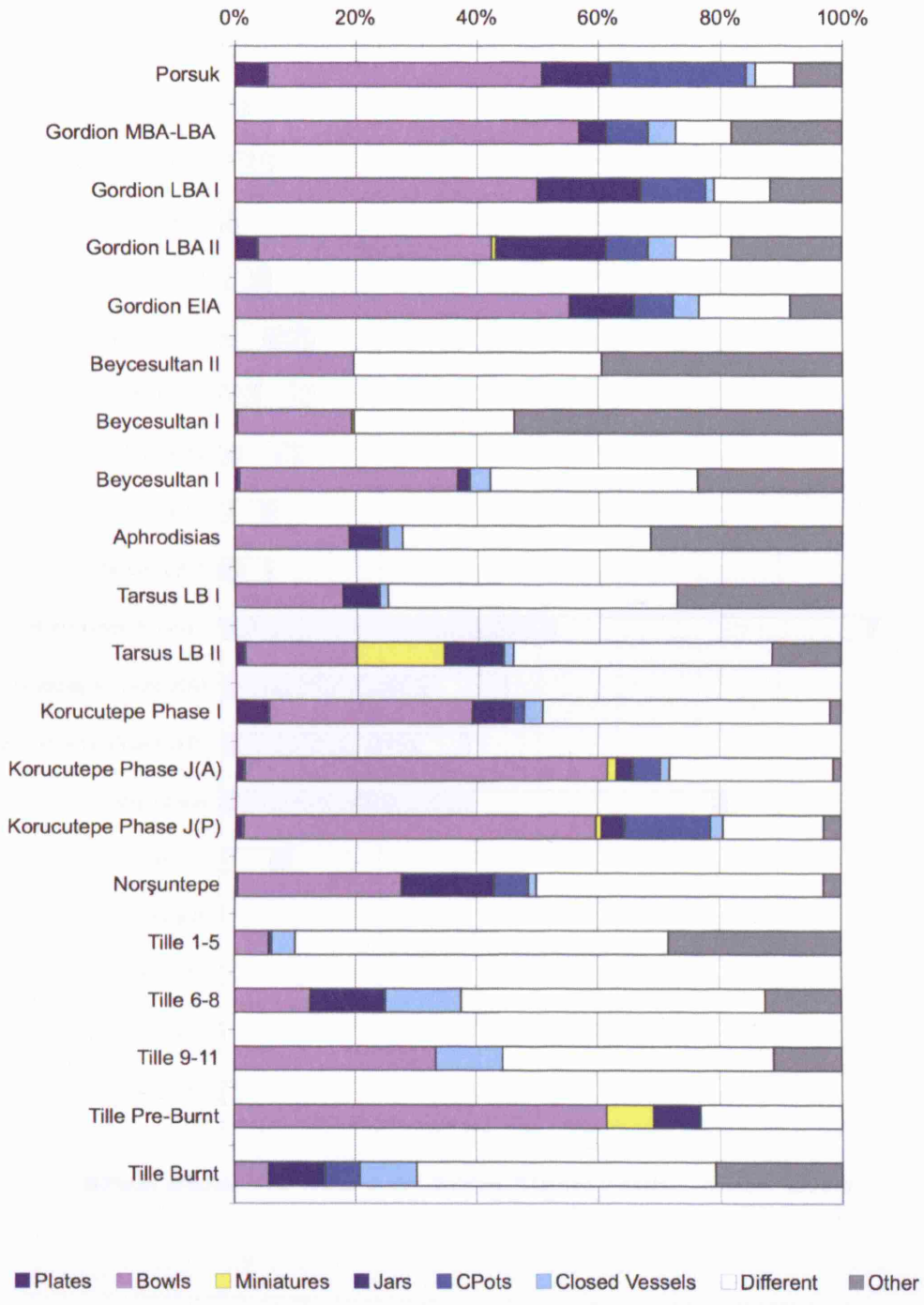


Figure 29: Summary of vessel shapes with NCA affinities

(1)



(2)

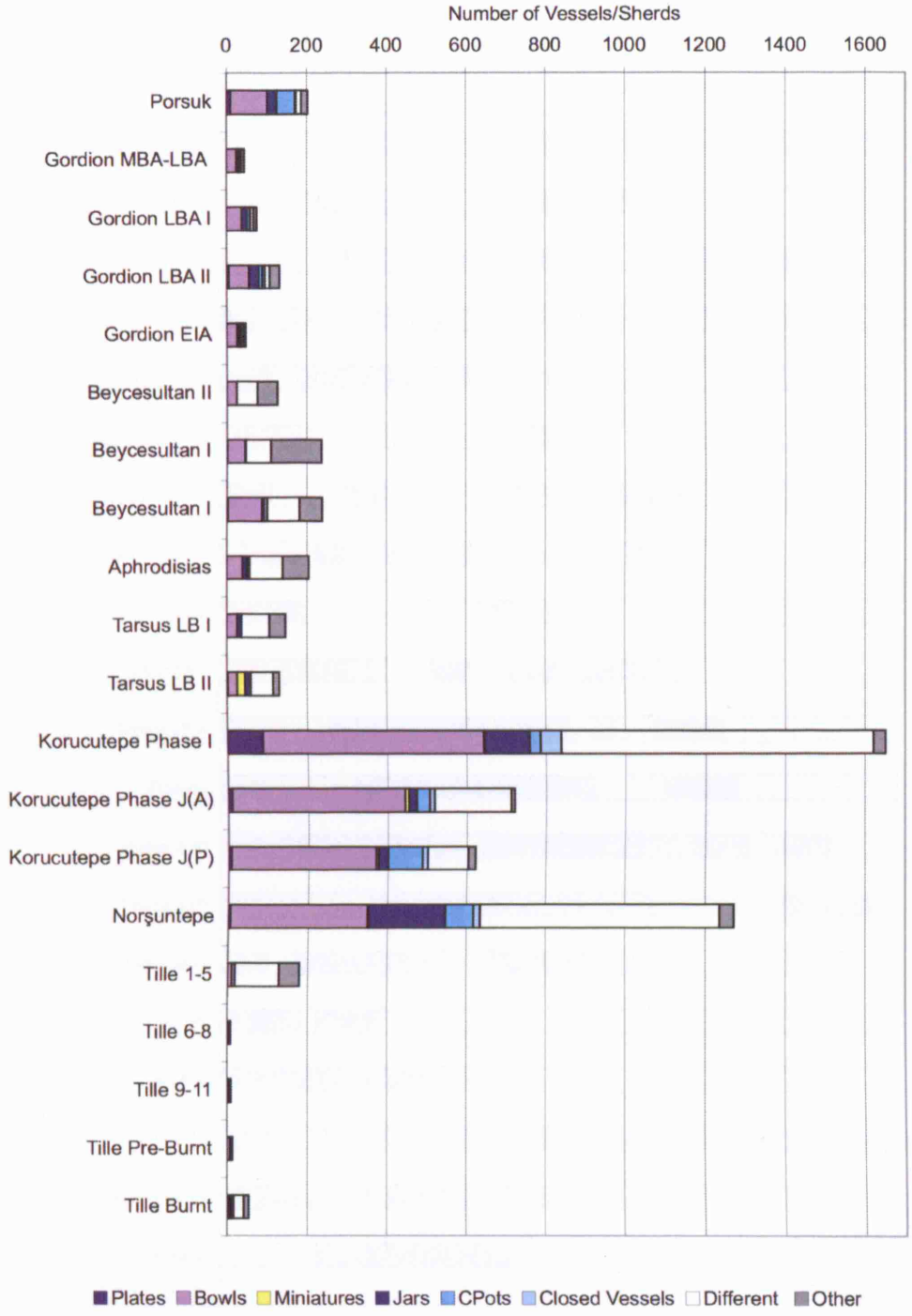
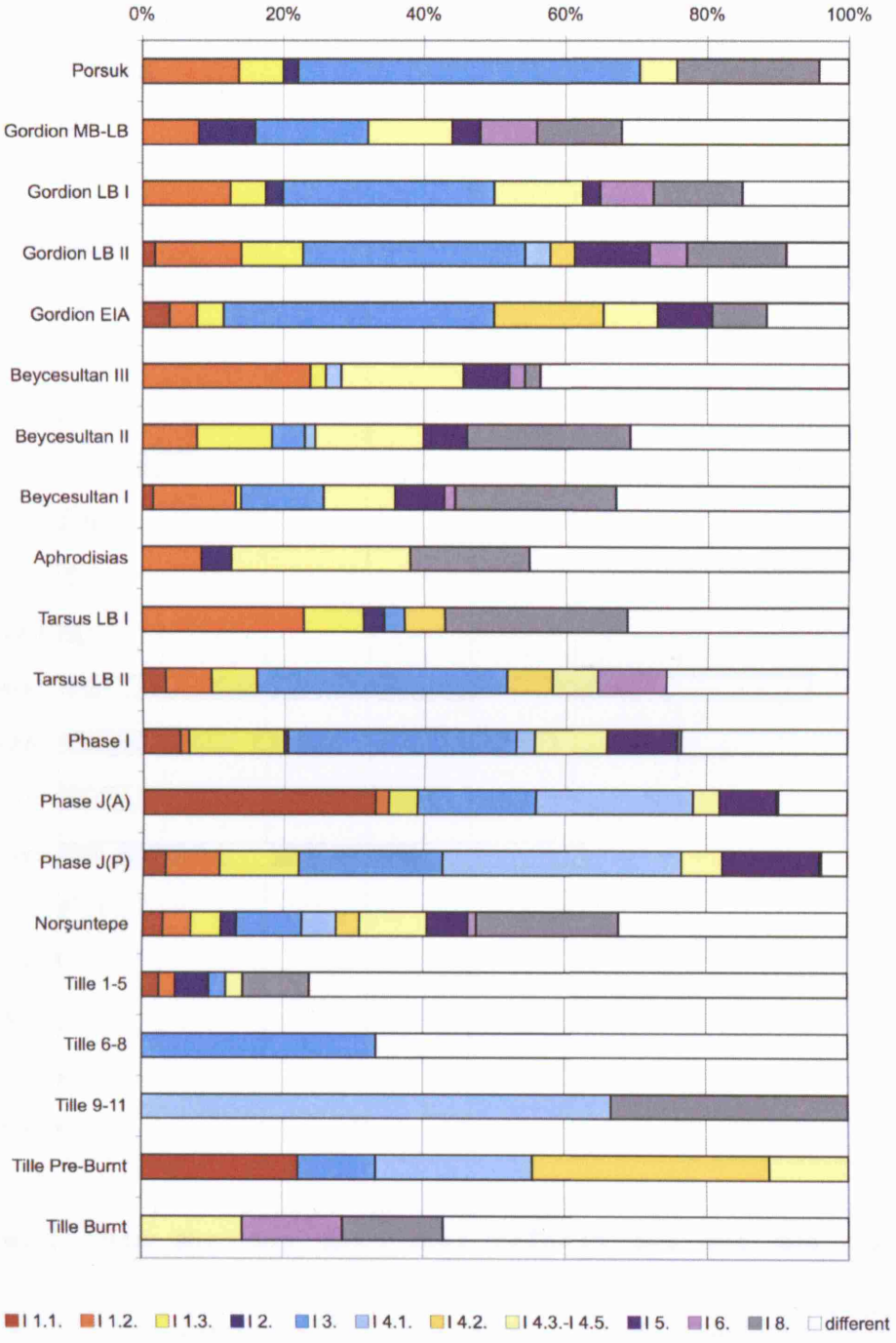

Number of Vessels/Sherds
0
200
400
600
800
1000
1200
1400
1600
Porsuk
Gordion MBA-LBA
Gordion LBA I
Gordion LBA II
Gordion EIA
Beycesultan II
Beycesultan I
Beycesultan I
Aphrodisias
Tarsus LB I
Tarsus LB II
Korucutepe Phase I
Korucutepe Phase J(A)
Korucutepe Phase J(P)
Norşuntepe
Tille 1-5
Tille 6-8
Tille 9-11
Tille Pre-Burnt
Tille Burnt
Plates
Bowls
Miniatures
Jars
CPots
Closed Vessels
Different
Other

Figure 30: Summary of bowl shapes with NCA affinities

(1)



(2)

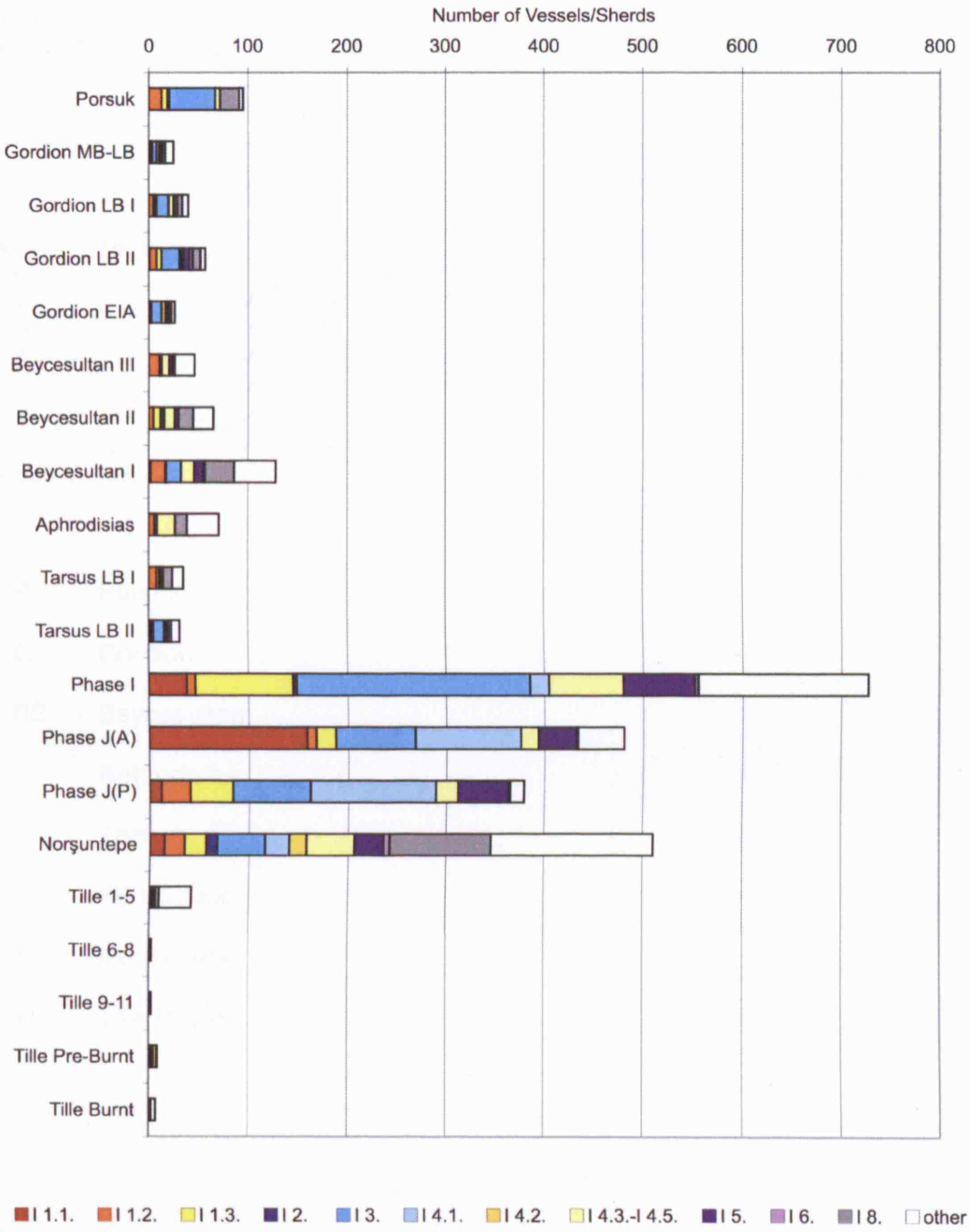

Number of Vessels/Sherds
0
100
200
300
400
500
600
700
800
Porsuk
Gordion MB-LB
Gordion LB I
Gordion LB II
Gordion EIA
Beycesultan III
Beycesultan II
Beycesultan I
Aphrodisias
Tarsus LB I
Tarsus LB II
Phase I
Phase J(A)
Phase J(P)
Norşuntepe
Tille 1-5
Tille 6-8
Tille 9-11
Tille Pre-Burnt
Tille Burnt
I 1.1.
I 1.2.
I 1.3.
I 2.
I 3.
I 4.1.
I 4.2.
I 4.3.-I 4.5.
I 5.
I 6.
I 8.
other

Table 26: Overview of the results of the ceramic analysis

Vessel Type	P	G	BS	A	T	K	N	TH
Strong Connections								
Plates	✓✓	✓	✓	-	✓	✓✓✓✓	✓	-
Miniatures	-	✓	✓	-	✓✓	✓✓	✓	✓
Connections								
Bowls								
I 1.1.	-	✓	✓	-	✓	✓✓✓✓	✓✓	✓
I 4.1.	-	✓	✓	-	✓	✓✓✓✓	✓✓✓	✓
I 4.2.	-	✓	-	-	✓	-	✓✓	✓
I 3.	✓✓✓	✓✓✓	✓✓	-	✓✓✓✓	✓✓✓✓	✓✓✓	✓
I 5.	-	✓	✓✓	-	✓	✓✓✓✓	✓✓✓	-
General Similarities								
Bowls								
I 1.2.	✓✓	✓✓	✓✓✓	✓	✓✓✓	✓✓✓	✓✓	✓
I 1.3.	✓	✓	✓		✓✓✓	✓✓✓✓	✓✓✓	-
I 4.3.-4.5.	✓	✓	✓✓✓	✓✓	✓✓✓	✓✓✓✓	✓✓✓	✓
I 8.	✓✓	✓✓	✓✓✓✓	✓✓	✓✓✓✓	✓	✓✓✓✓	✓
Jars	✓✓✓	✓✓✓	✓	✓✓	✓✓✓	✓✓✓✓	✓✓✓✓	✓
Cooking Pots	✓✓✓	✓✓✓	-	✓	-	✓✓✓✓	✓✓✓✓	✓
Closed Vessels	✓	✓✓	✓	✓	✓	✓✓✓✓	✓✓	✓

✓= 1-10 ✓✓ = 11-20 ✓✓✓= 21- 50 ✓✓✓✓= > 50

P Porsuk

G Gordion

BS Beycesultan

A Aphrodisias

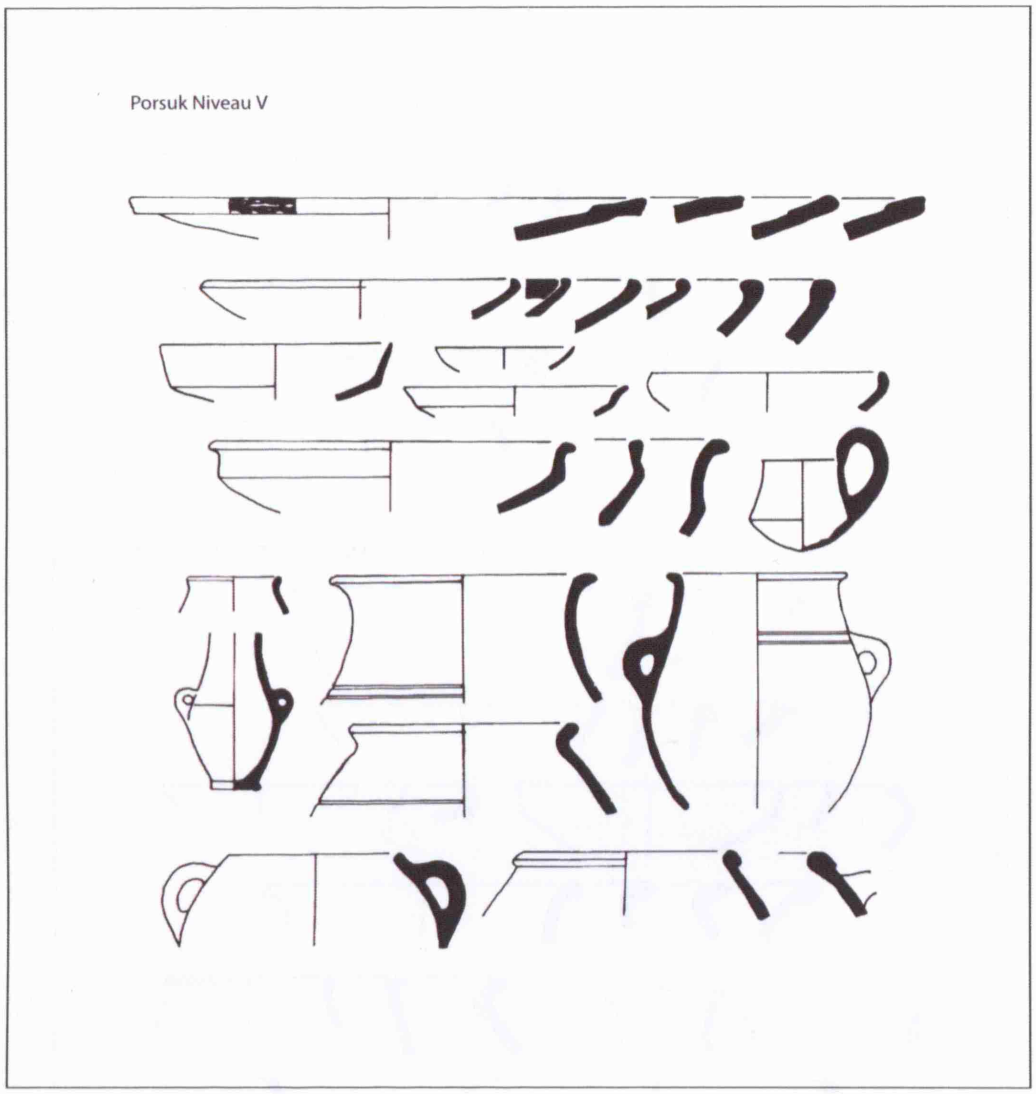
T Tarsus

K Korucutepe

N Norşuntepe

TH Tille Höyük

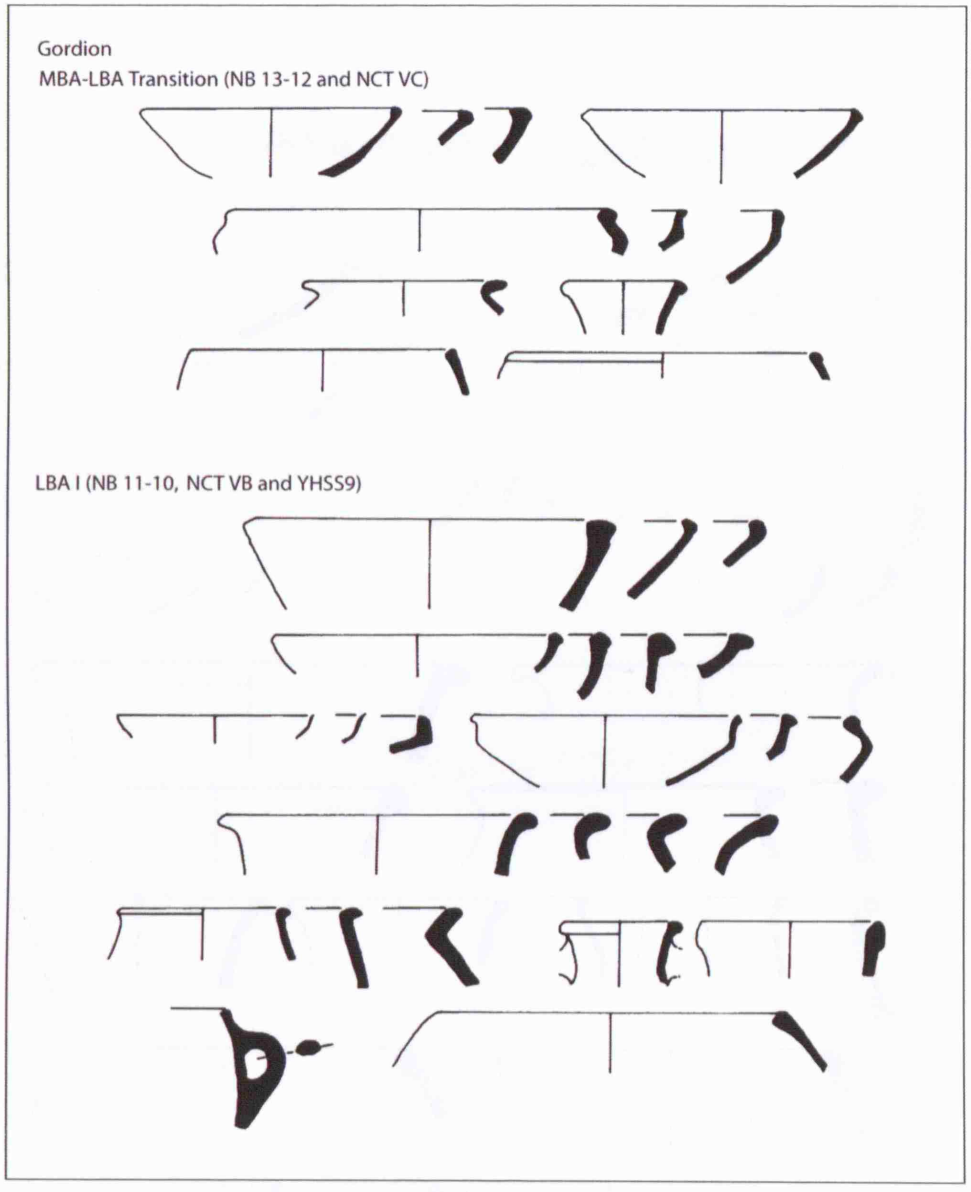
Figure 31: Porsuk Niveau V pottery with NCA affinities (after Dupré 1983)



N.B.: Illustrations not to scale.

Figure 32: Gordion LBA pottery with NCA affinities (after Gunter 1991)

(1)

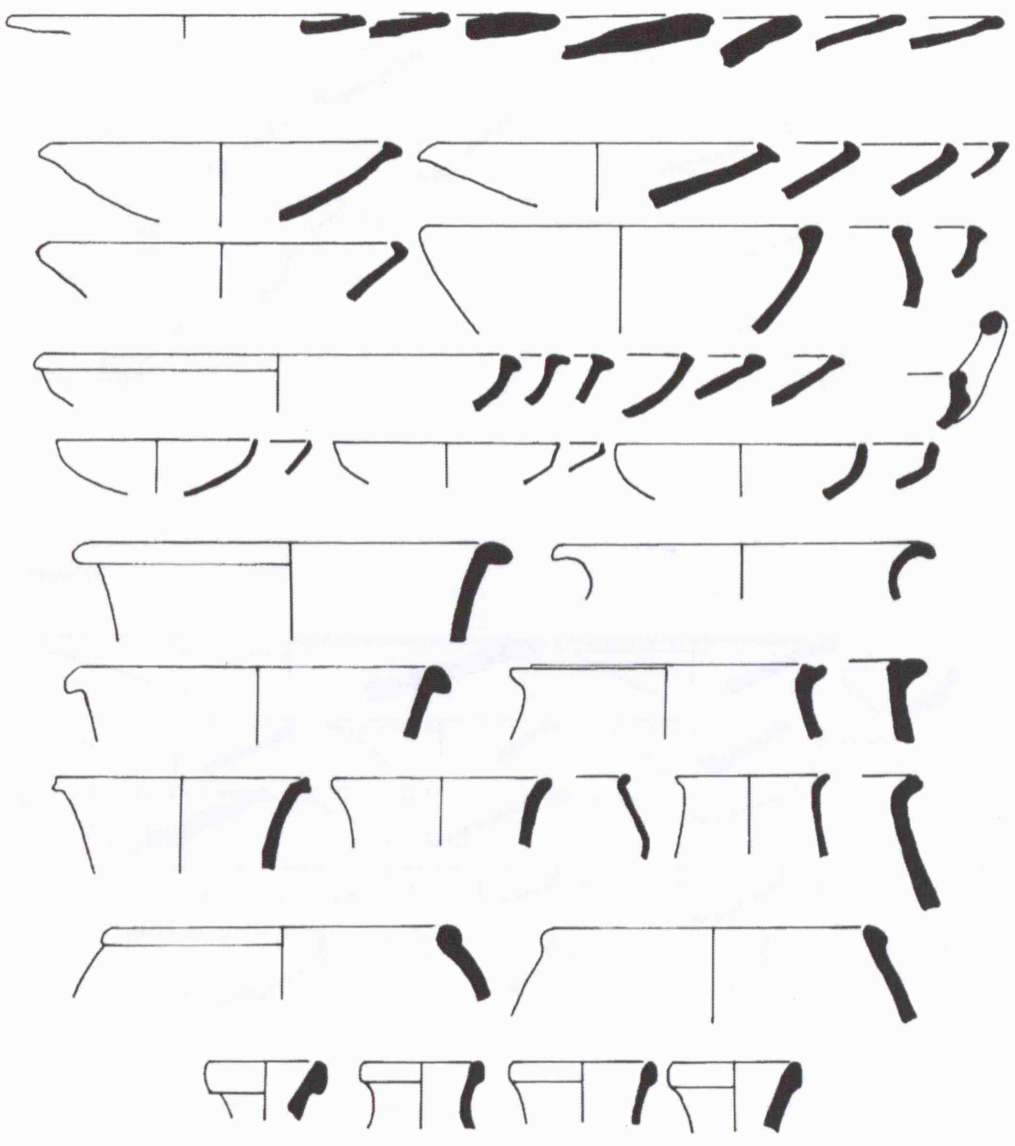


N.B.: Illustrations not to scale.

(2)

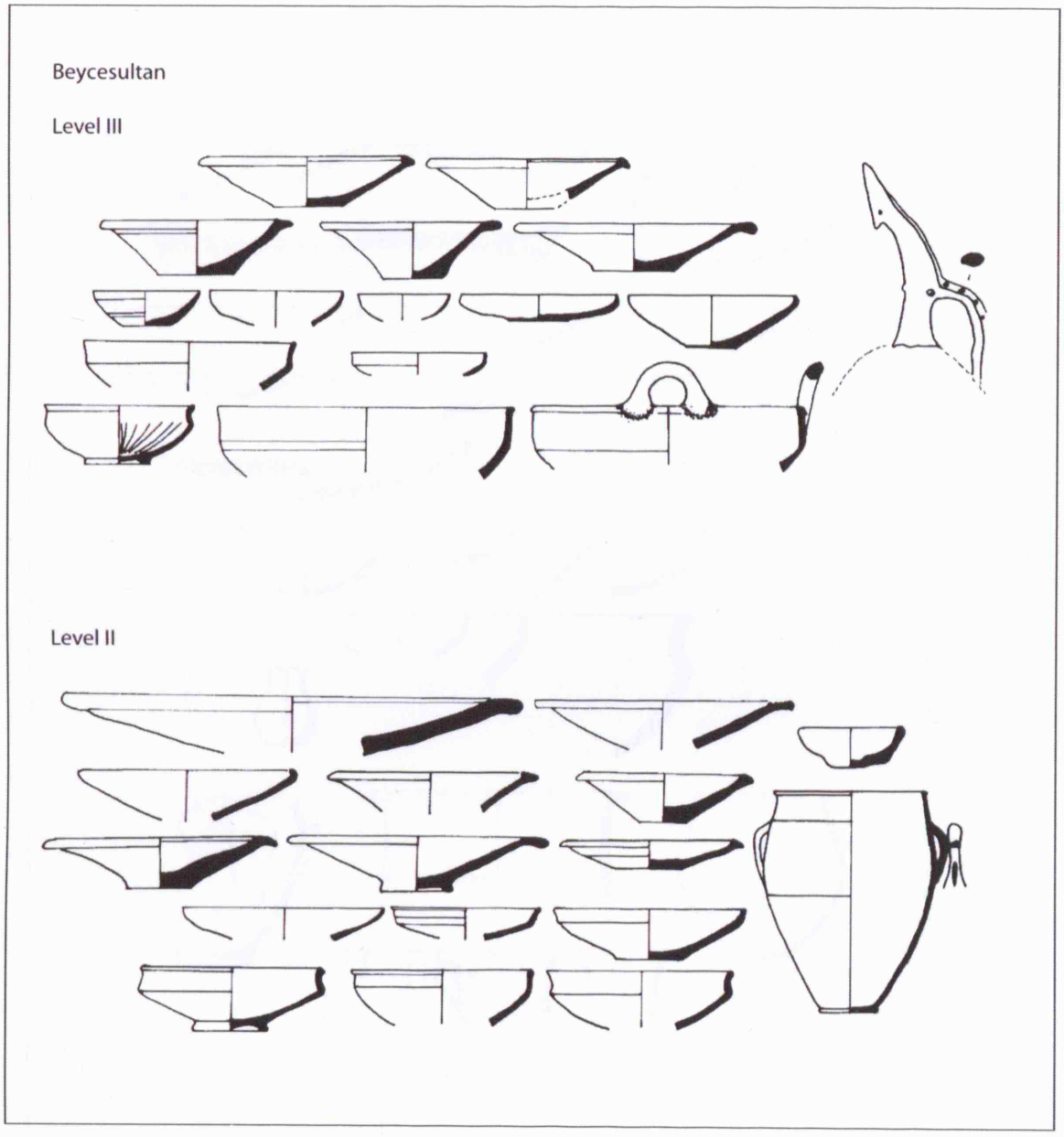
Gordion

LBA II (NB 06-09, NCT VA and YHSS8)



N.B.: Illustrations not to scale.

Figure 33: Beycesultan LBA pottery with NCA affinities (after Mellaart and Murray 1995)

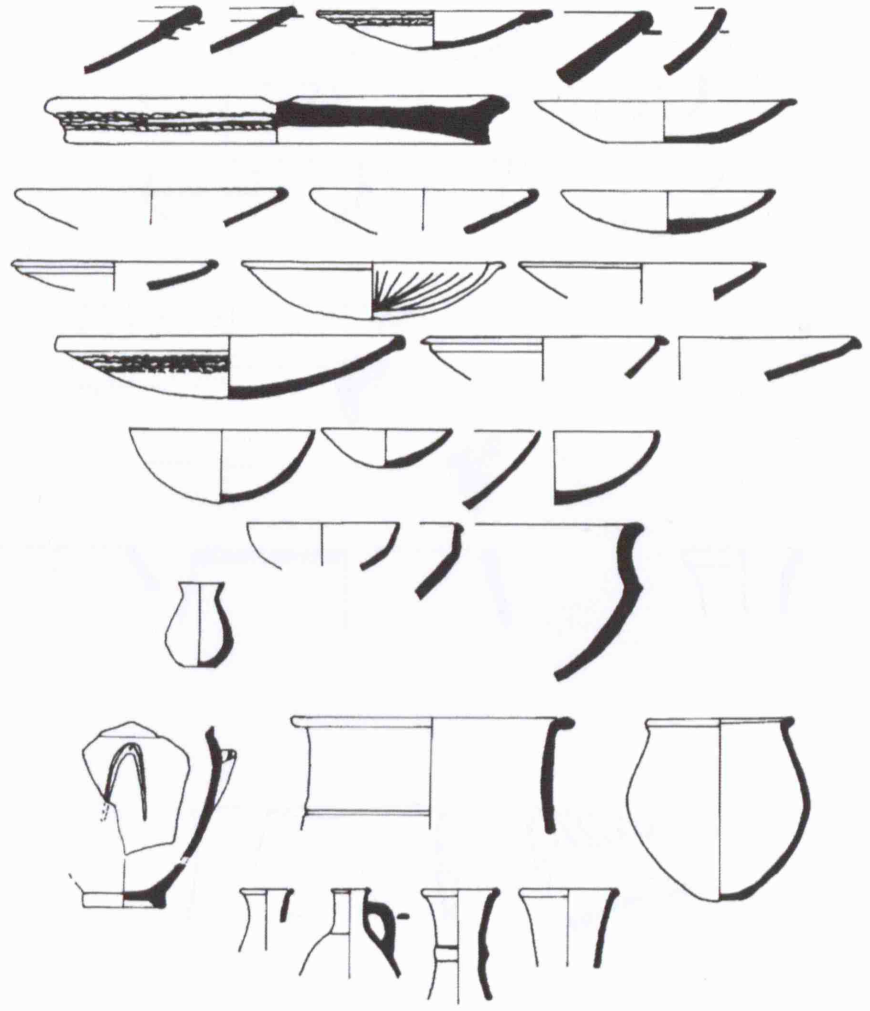


N.B.: Illustrations not to scale.

(2)

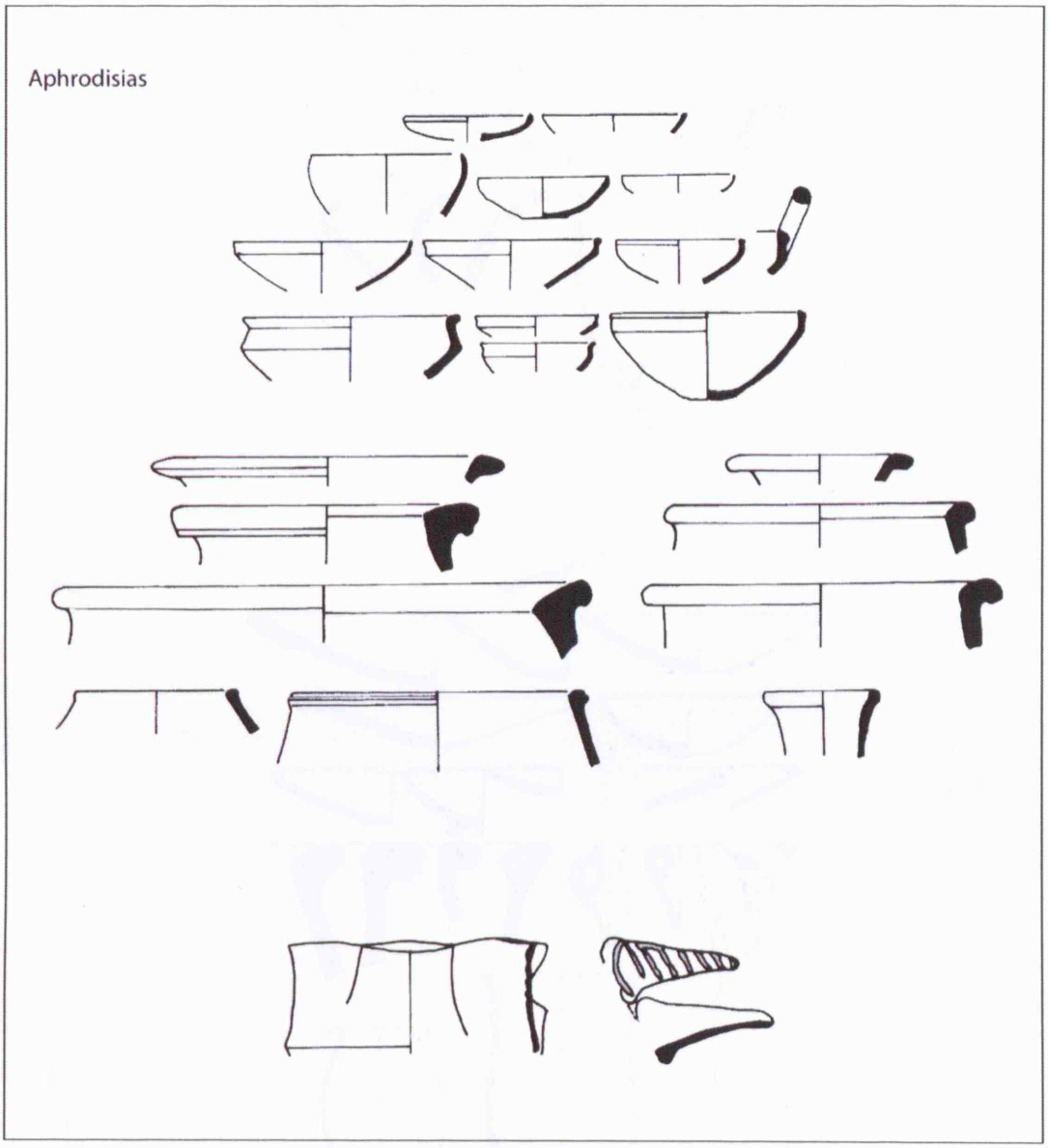
Beycesultan

Level I



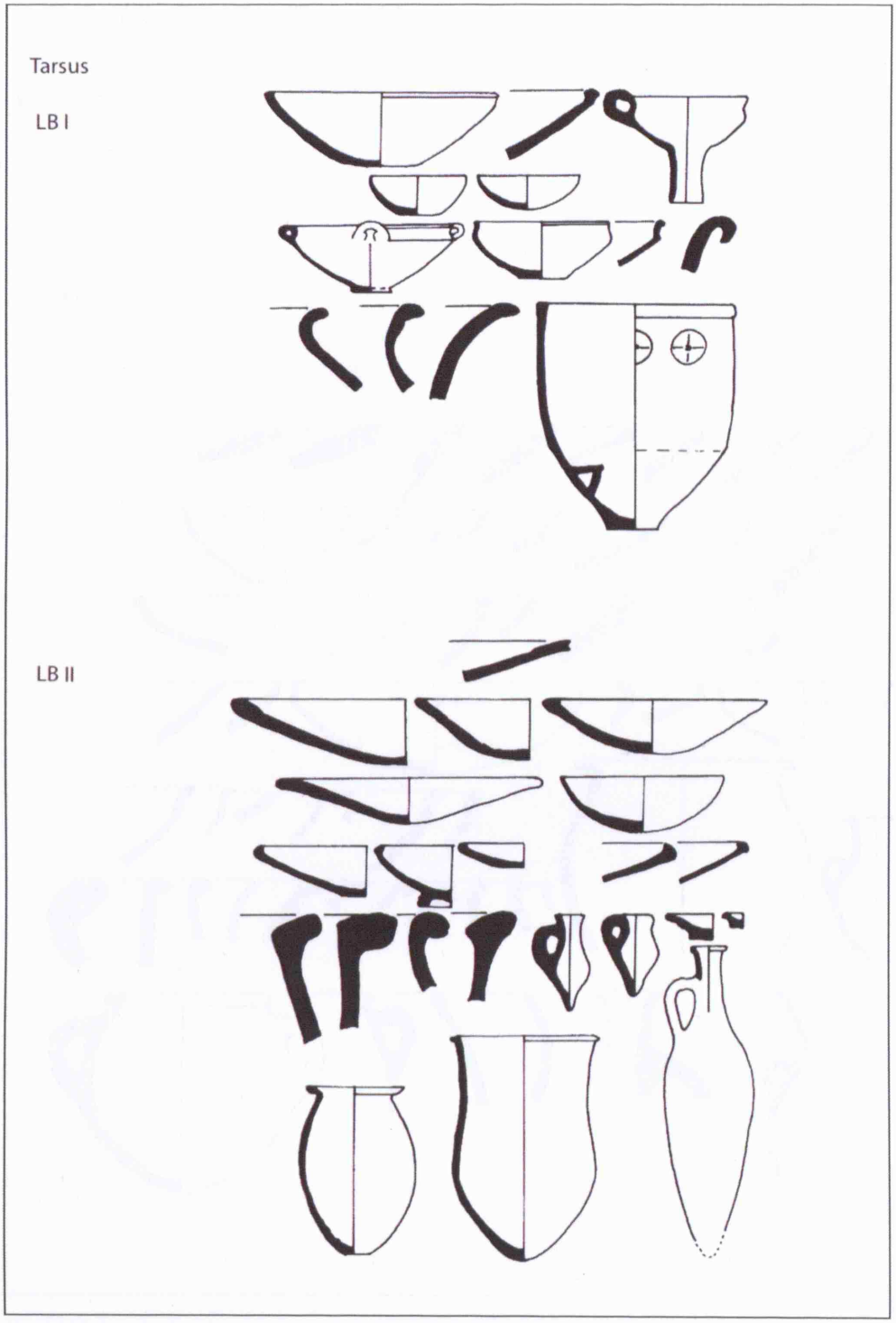
N.B.: Illustrations not to scale.

Figure 34: Aphrodisias LBA pottery with NCA affinities (after Joukowsky 1986)



N.B.: Illustrations not to scale.

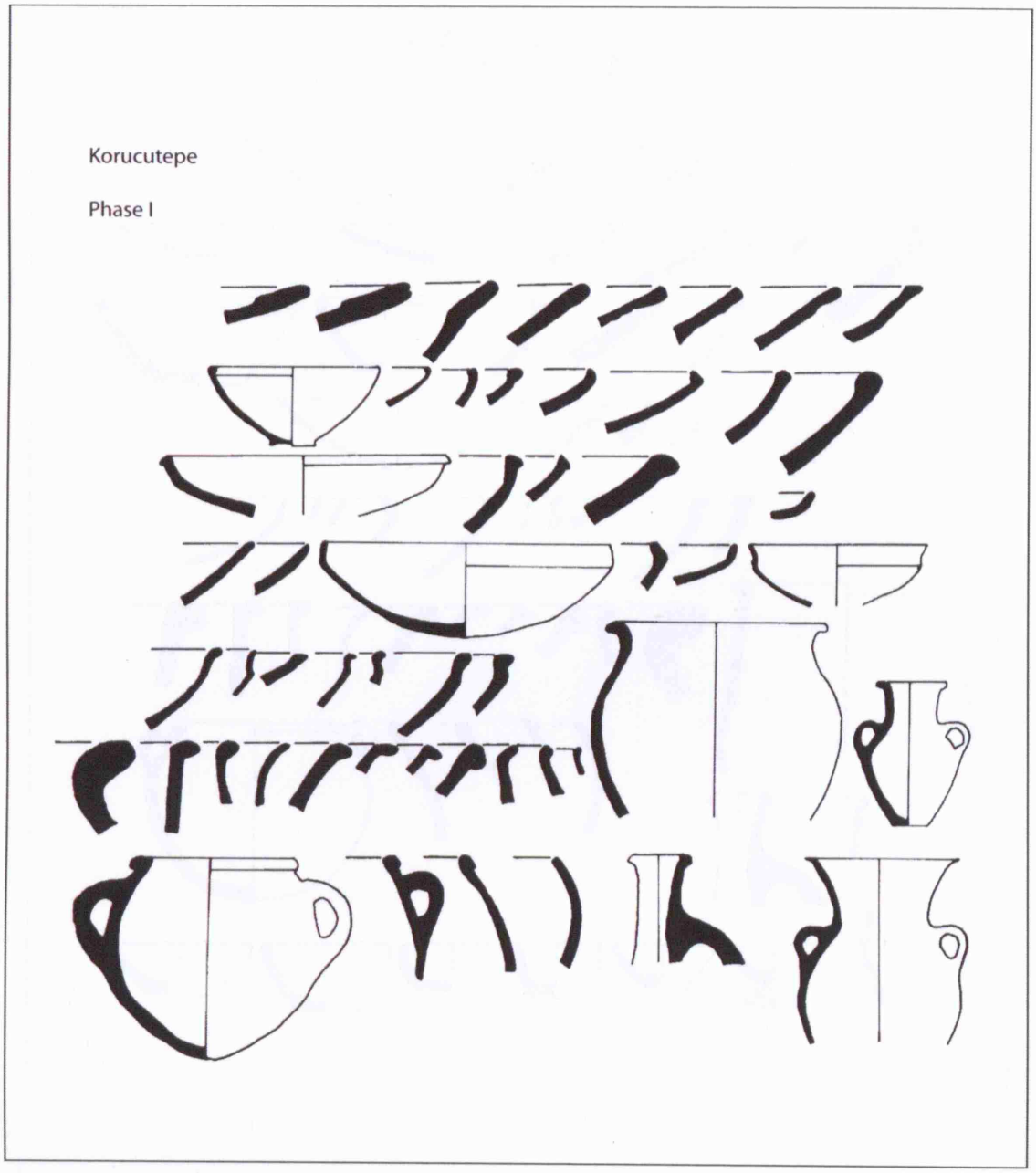
Figure 35: Tarsus LBA pottery with NCA affinities (after Goldman 1956)



N.B.: Illustrations not to scale.

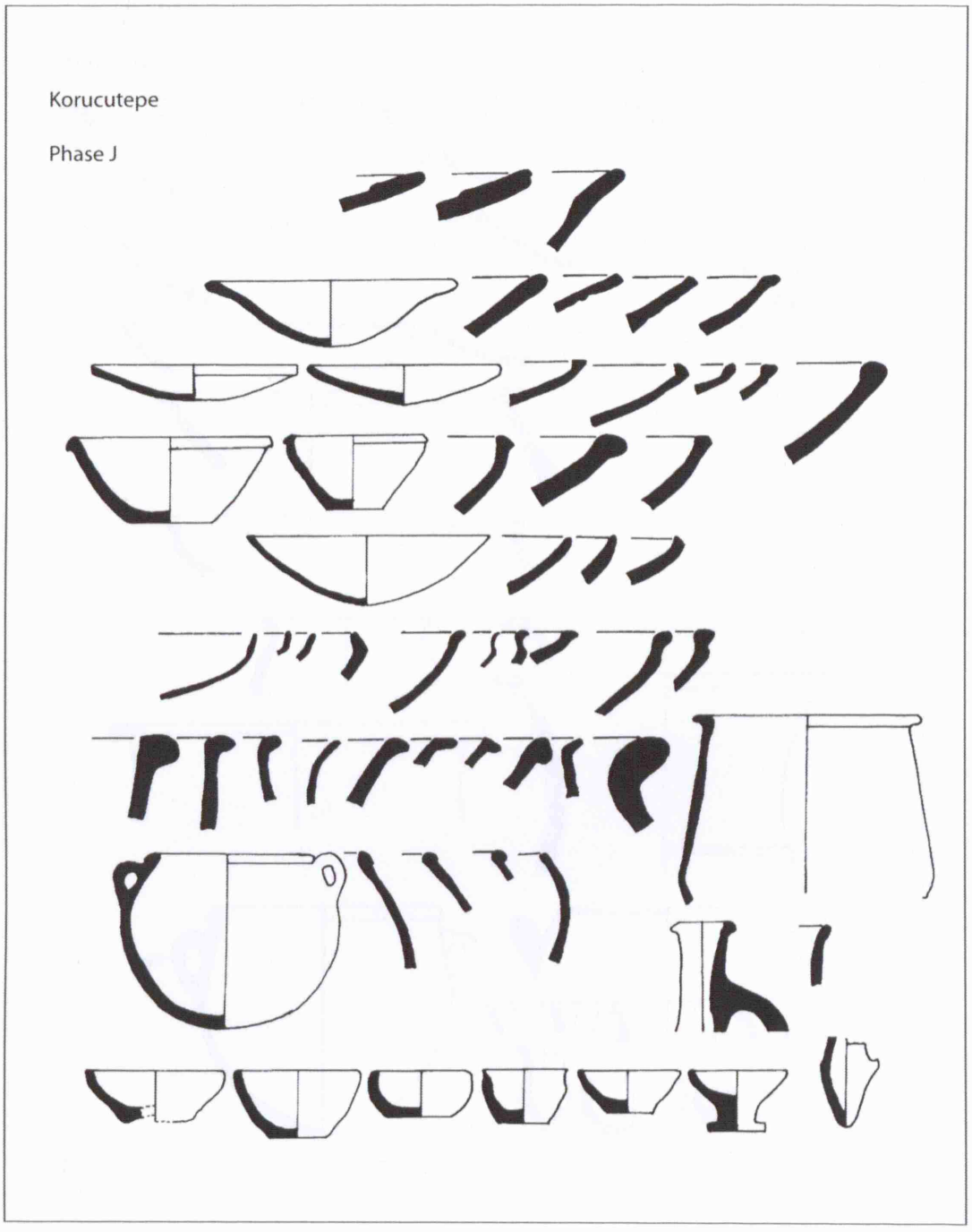
Figure 36: Korucutepe LBA pottery with NCA affinities (after Griffin 1981)

(1)



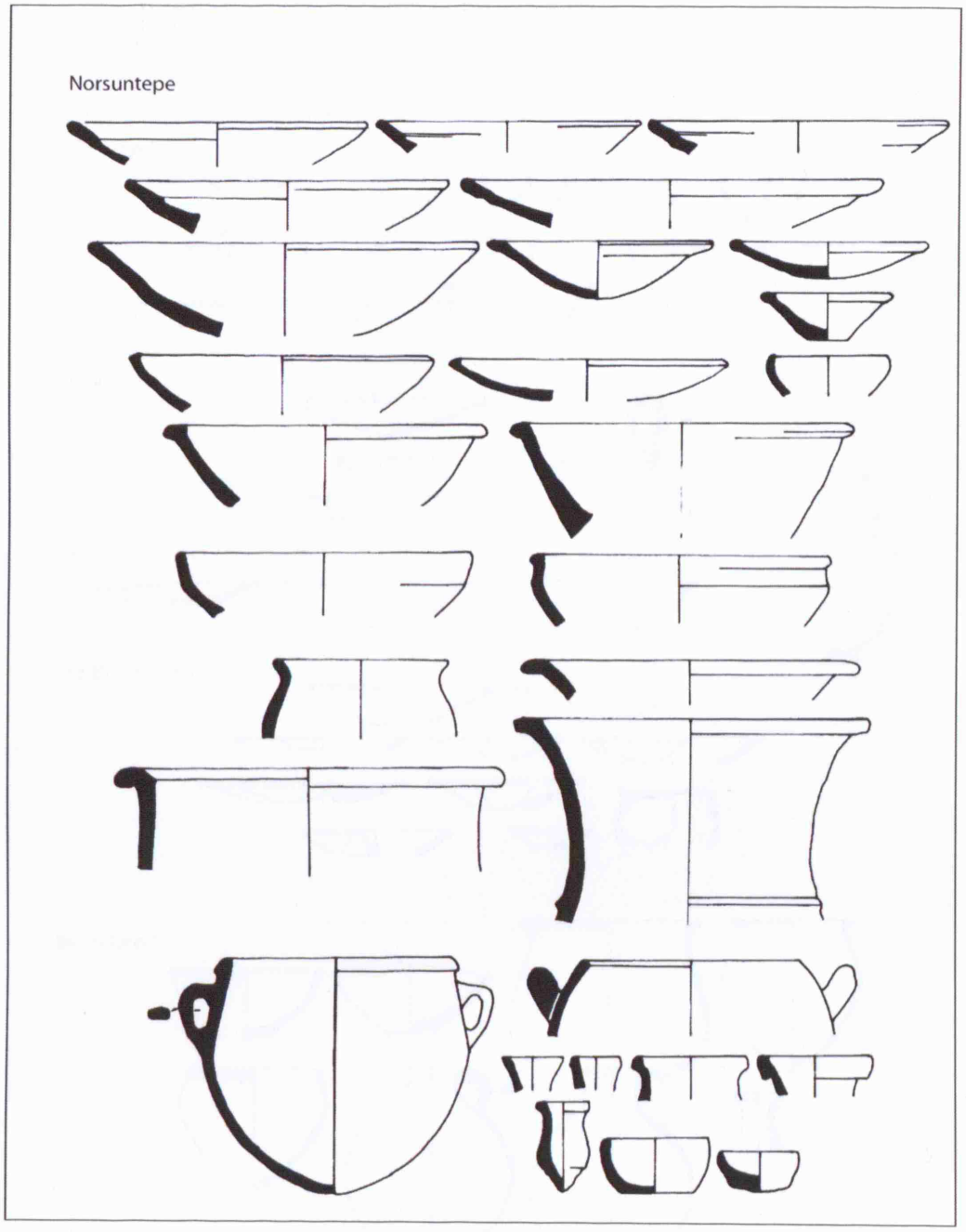
N.B.: Illustrations not to scale.

(2)



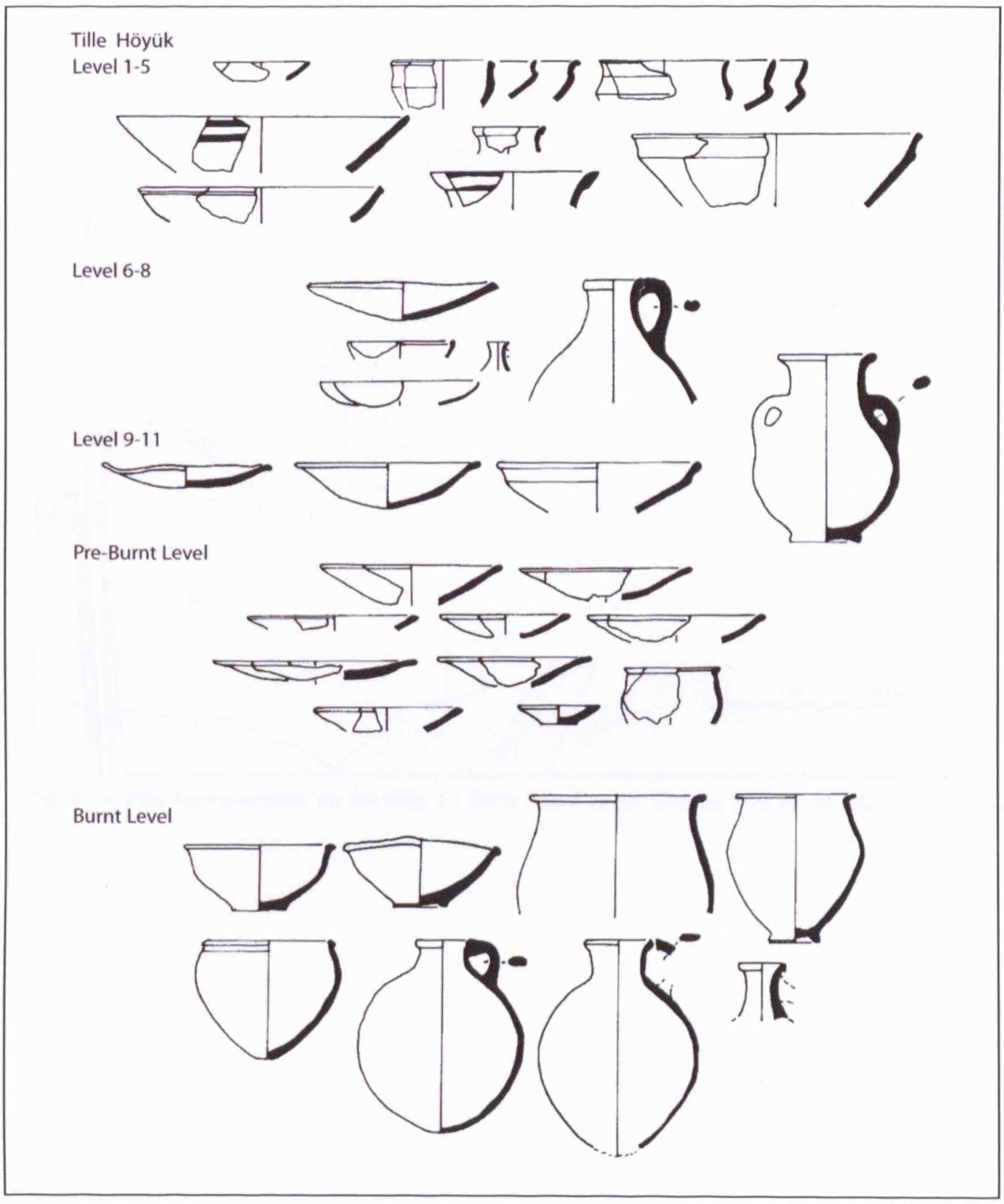
N.B.: Illustrations not to scale.

Figure 37: Norşuntepe LBA pottery with NCA affinities (after Korbel 1985)



N.B.: Illustrations not to scale.

Figure 38: Tille Höyük LBA pottery with NCA affinities (after Summers 1993)



N.B.: Illustrations not to scale.

PORSUK

Map 8: Porsuk excavation areas (modified after Pelon 1992, Fig. 6)

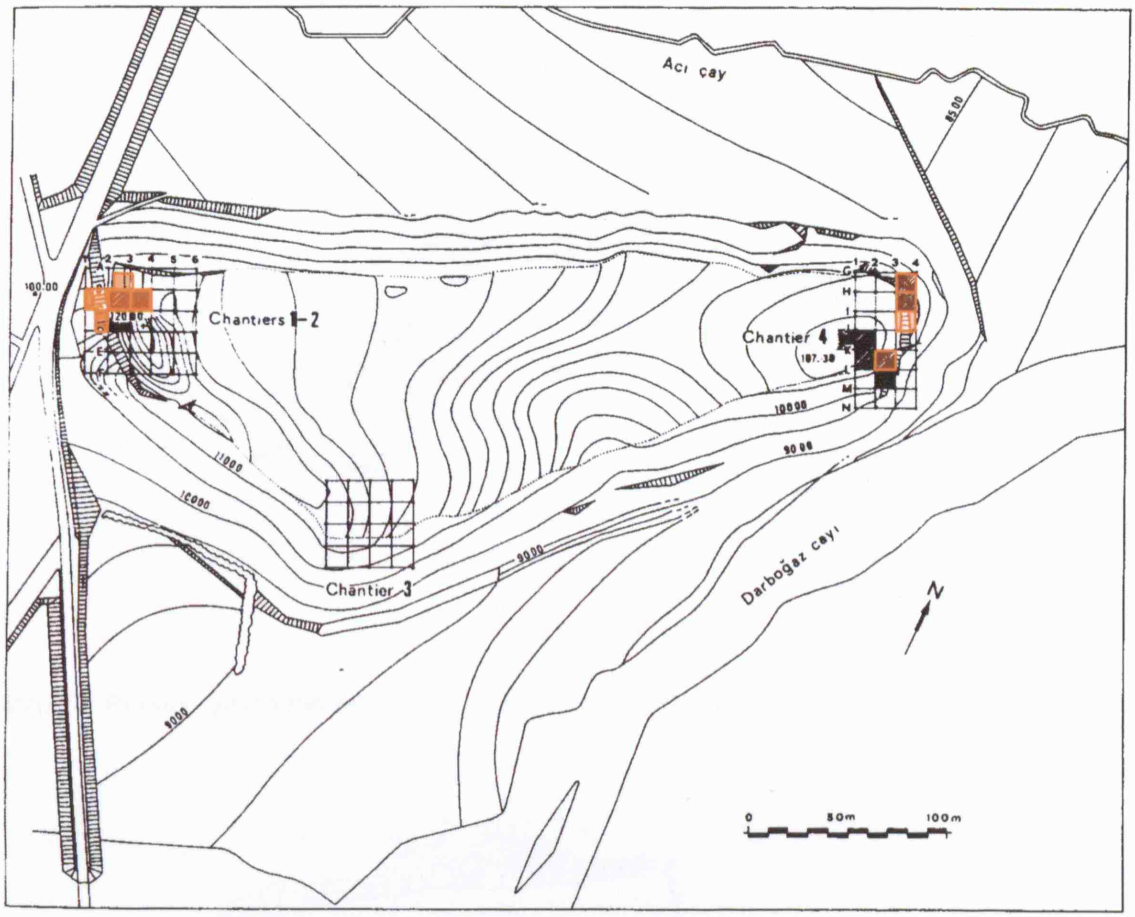
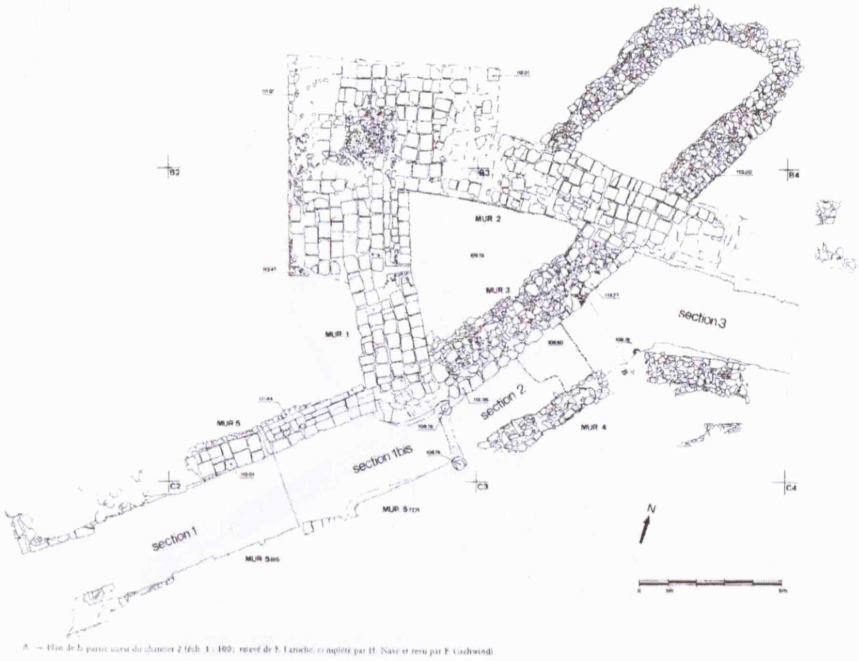


Fig. 6. — Plan topographique du site (éch. 1 : 4000; relevé de Ph. Guérin, revu par H. Nave et F. Gschwind).

Map 9: Porsuk LBA fortification wall in Chantier 2 (after Pelon 1992, A.)



A. — Plan de la partie ouest du chantier 2 (éch. 1 : 100; relevé de P. Laroche, complété par H. Nave et revu par F. Gschwind).

Map 10: Porsuk "*pièce hittite*" (modified after Pelon 1992, Fig. 30)

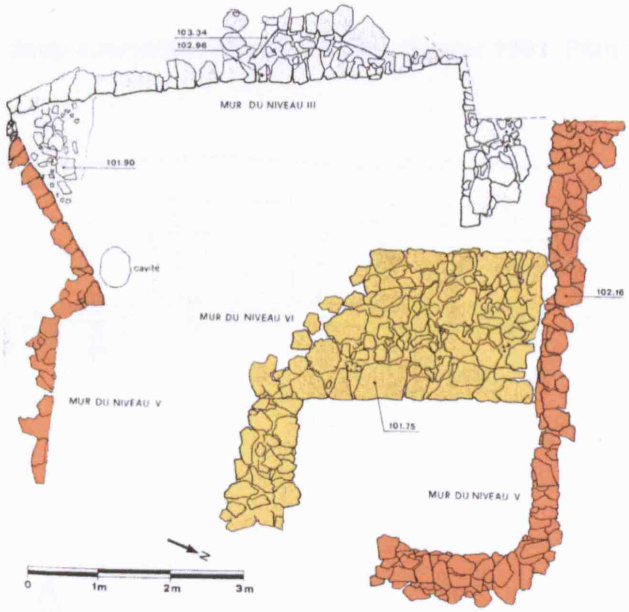
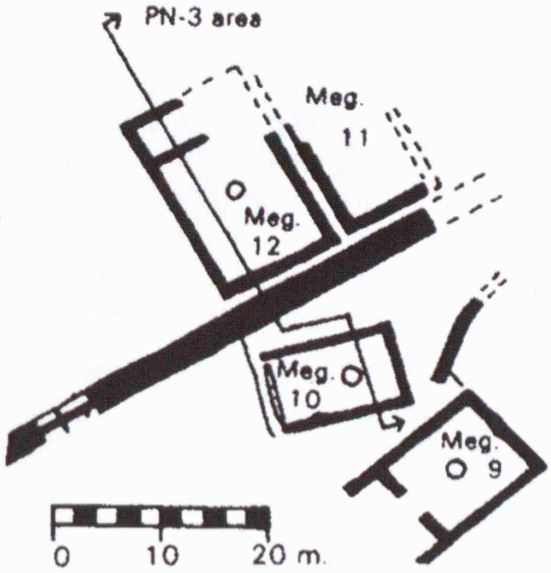


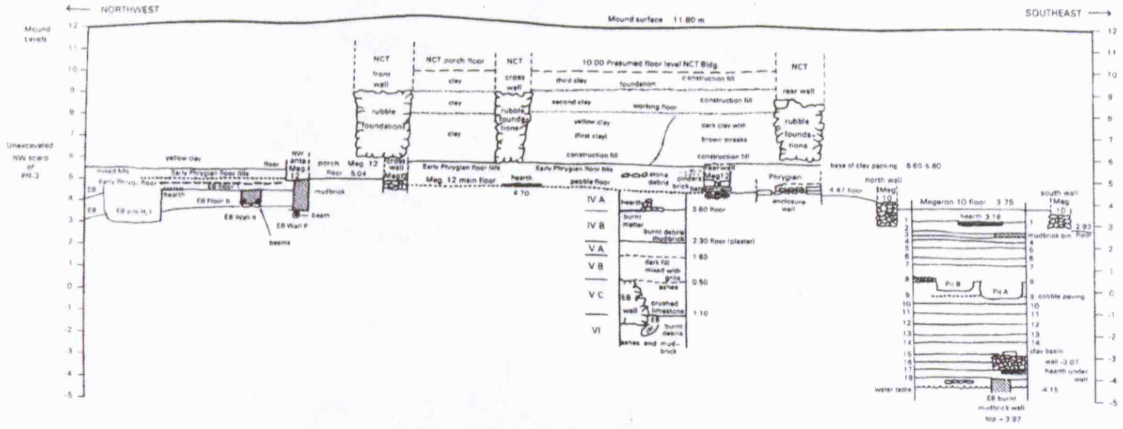
Fig. 30. — Plan du chantier 4, secteur sud-est (éch. 1 : 50; relevé de H. Nave revu par F. Gschwind).

GORDION

Map 11: Gordion excavation areas (modified after Gunter 1991, Plan 11)

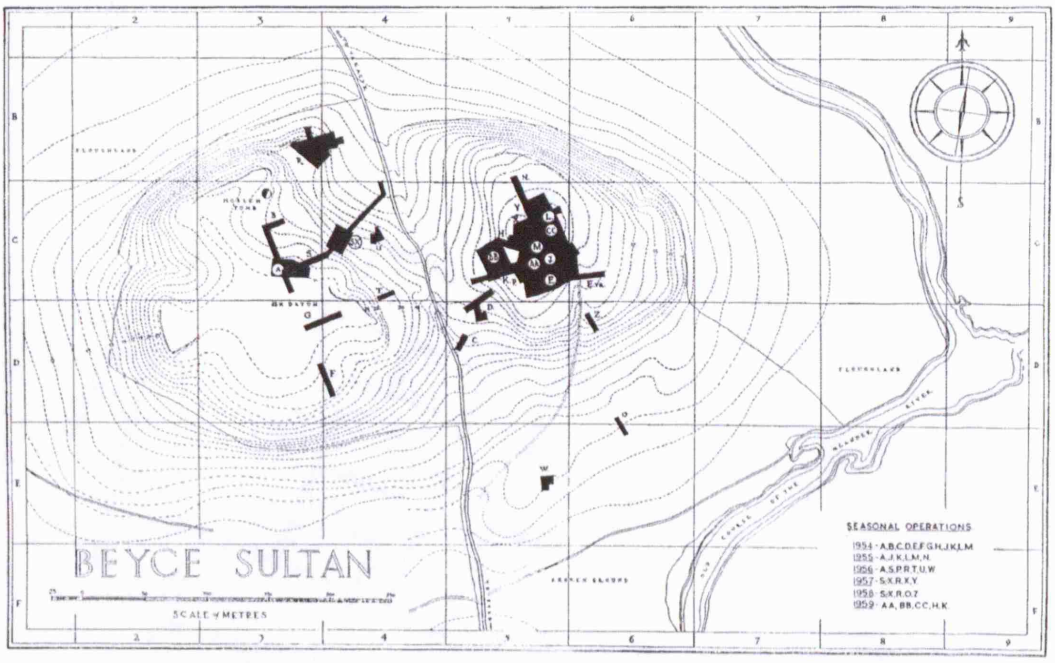


Map 12: Gordion deep soundings (modified after Gunter 1991, Plan 11)

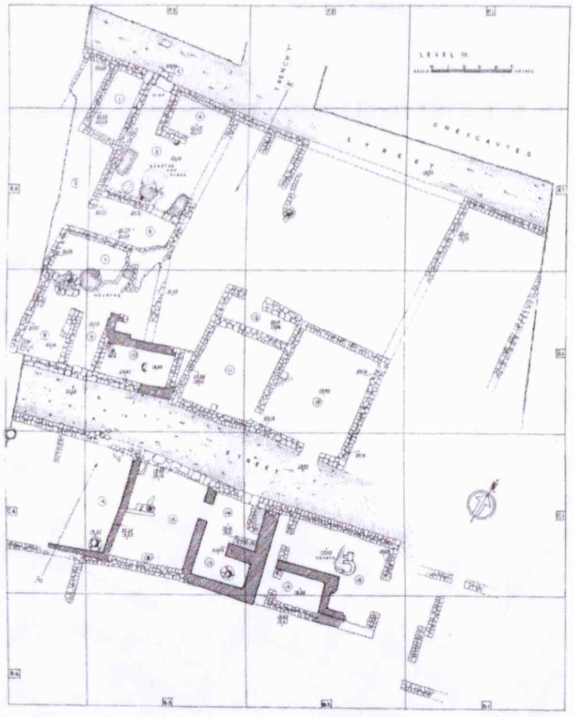


BEYCESULTAN

Map 13: Beycesultan excavation areas (after Lloyd 1972, Fig. 1)

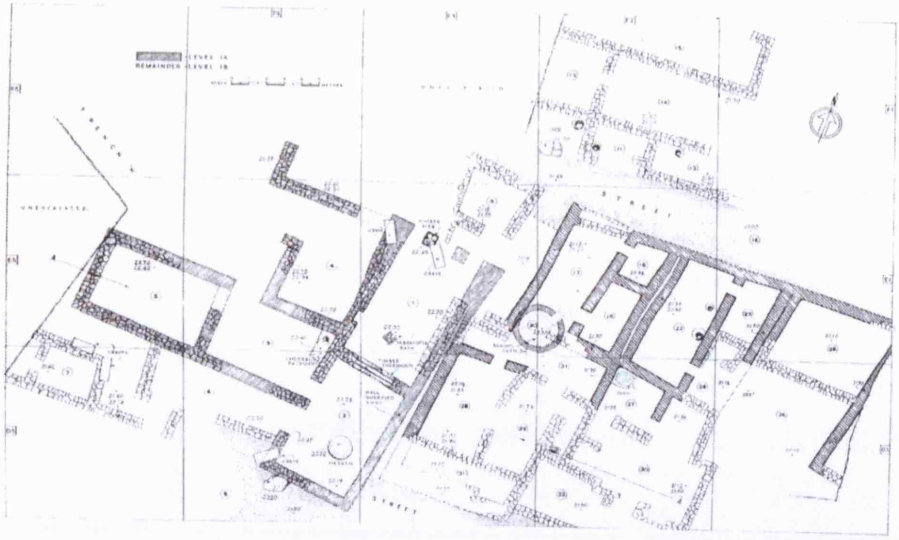


Map 14: Beycesultan Level III, East Mound (after Lloyd 1972, Fig. 2)

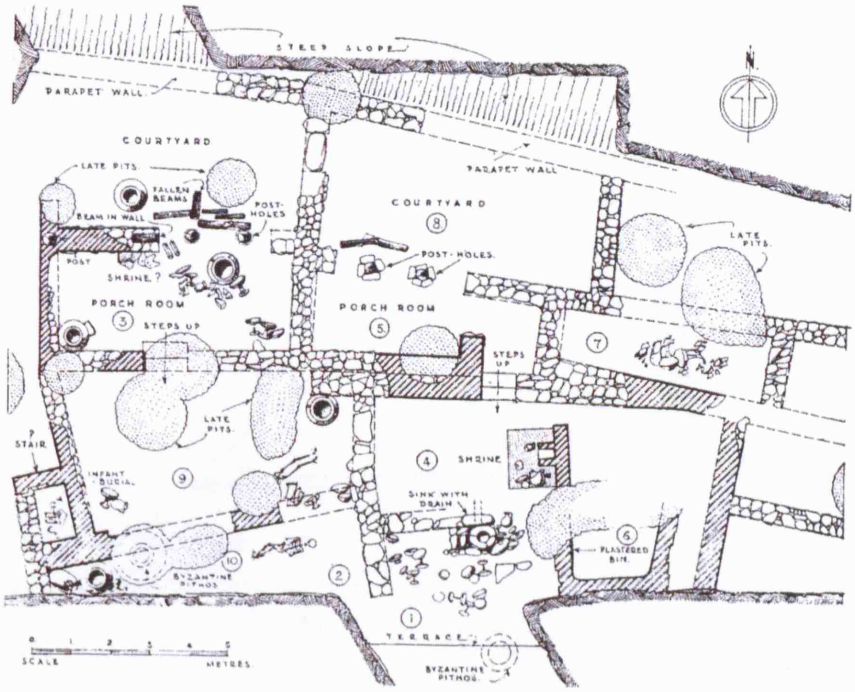


Map 15: Beycesultan Level II, East Mound (after Lloyd 1972, Fig. 3)

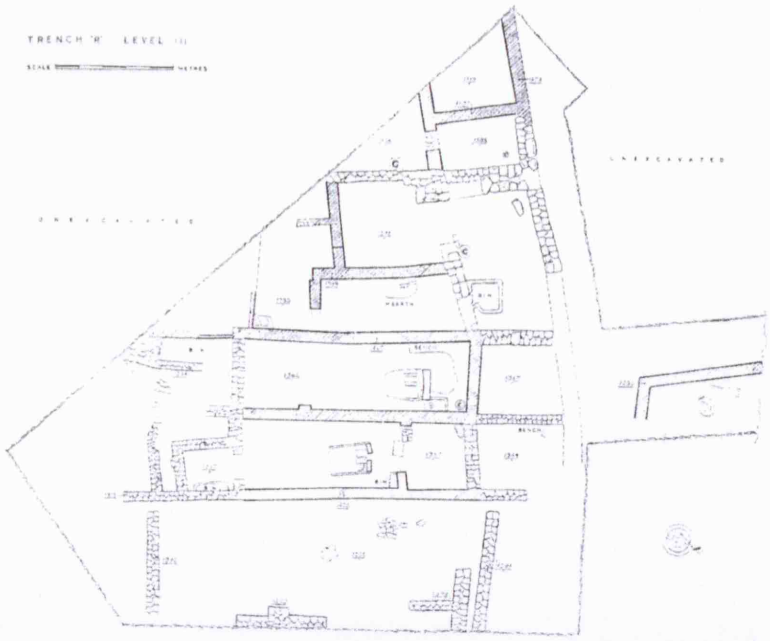
Map 16: Beycesultan Level I, East Mound (after Lloyd 1972, Fig. 4)



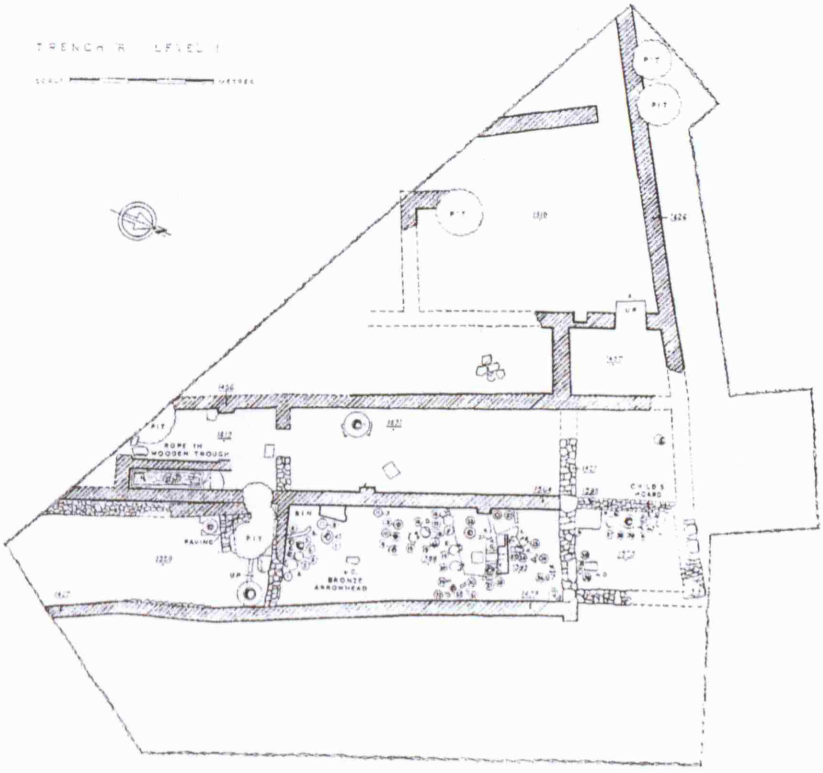
Map 17: Beycesultan Level II, West Mound (Area A) (after Lloyd 1972, Fig. 6)



Map 18: Beycesultan Level III, West Mound (Area R) (after Lloyd 1972, Fig. 7)

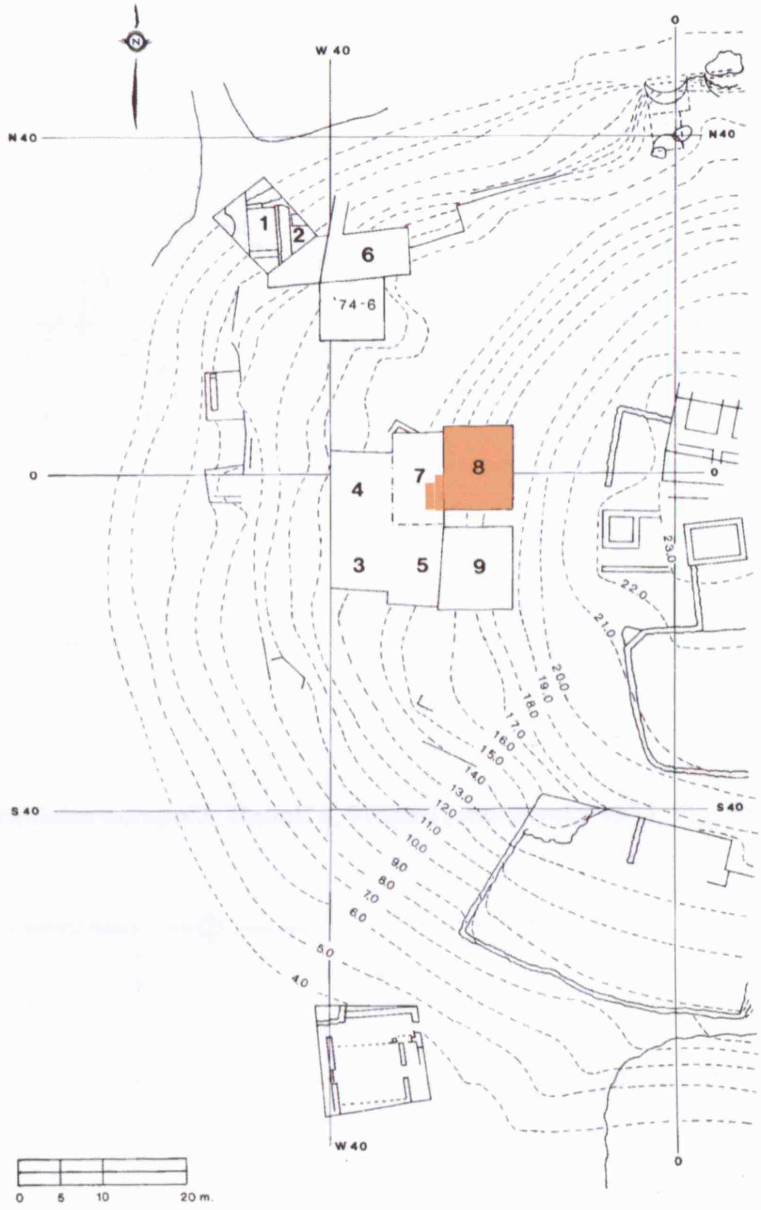


Map 19: Beycesultan Level II, West Mound (Area R) (after Lloyd 1972, Fig. 8)

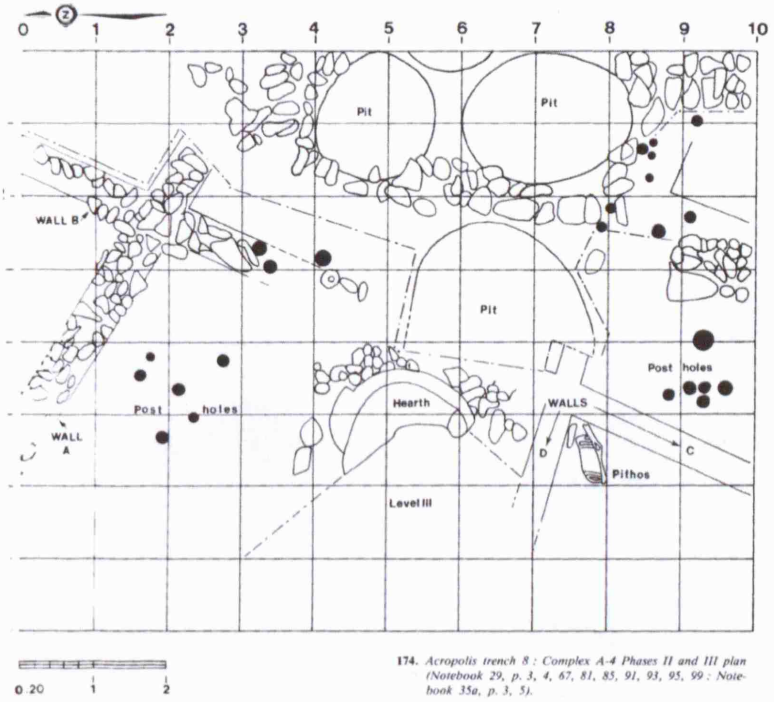


APHRODISIAS

Map 20: Aphrodisias acropolis LBA excavation area (modified after Joukowsky 1986, Fig. 61)

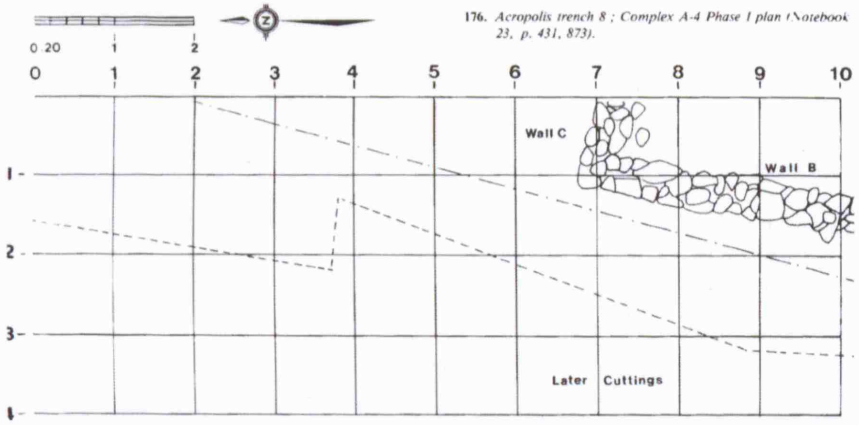


Map 21: Aphrodisias acropolis Trench 8, Phase II and III (after Joukowsky 1986, Fig. 174)



174. *Acropolis trench 8 : Complex A-4 Phases II and III plan (Notebook 29, p. 3, 4, 67, 81, 85, 91, 93, 95, 99 : Notebook 35a, p. 3, 5).*

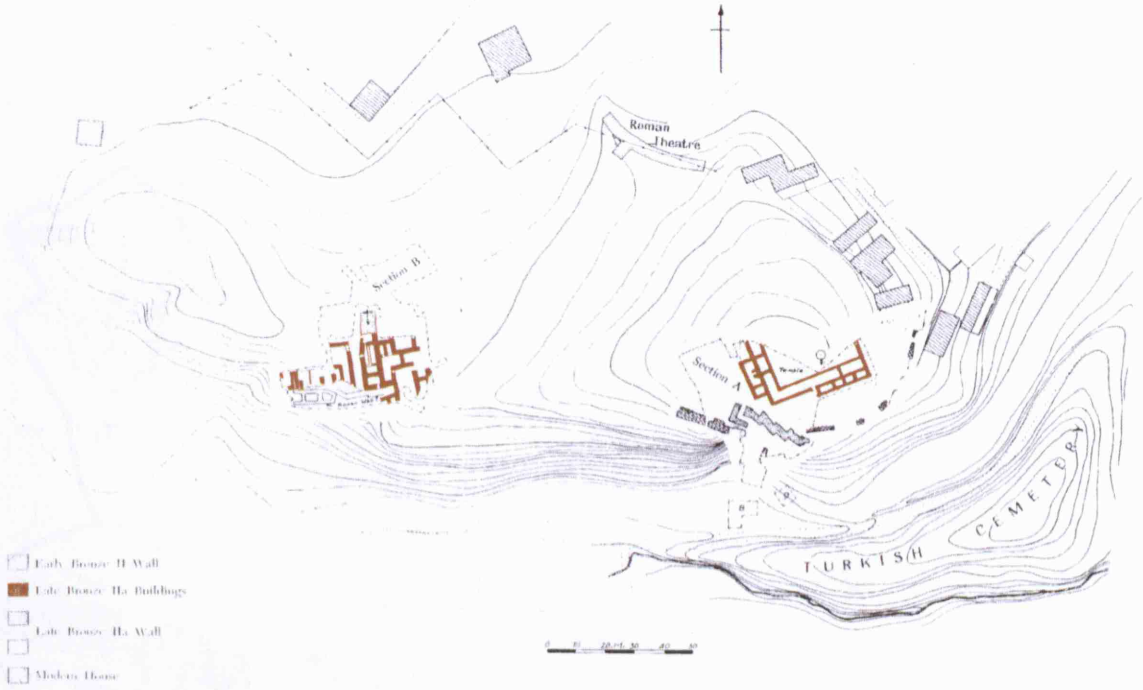
Map 22: Aphrodisias acropolis Trench 8, Phase I (Joukowsky 1986, Fig. 176)



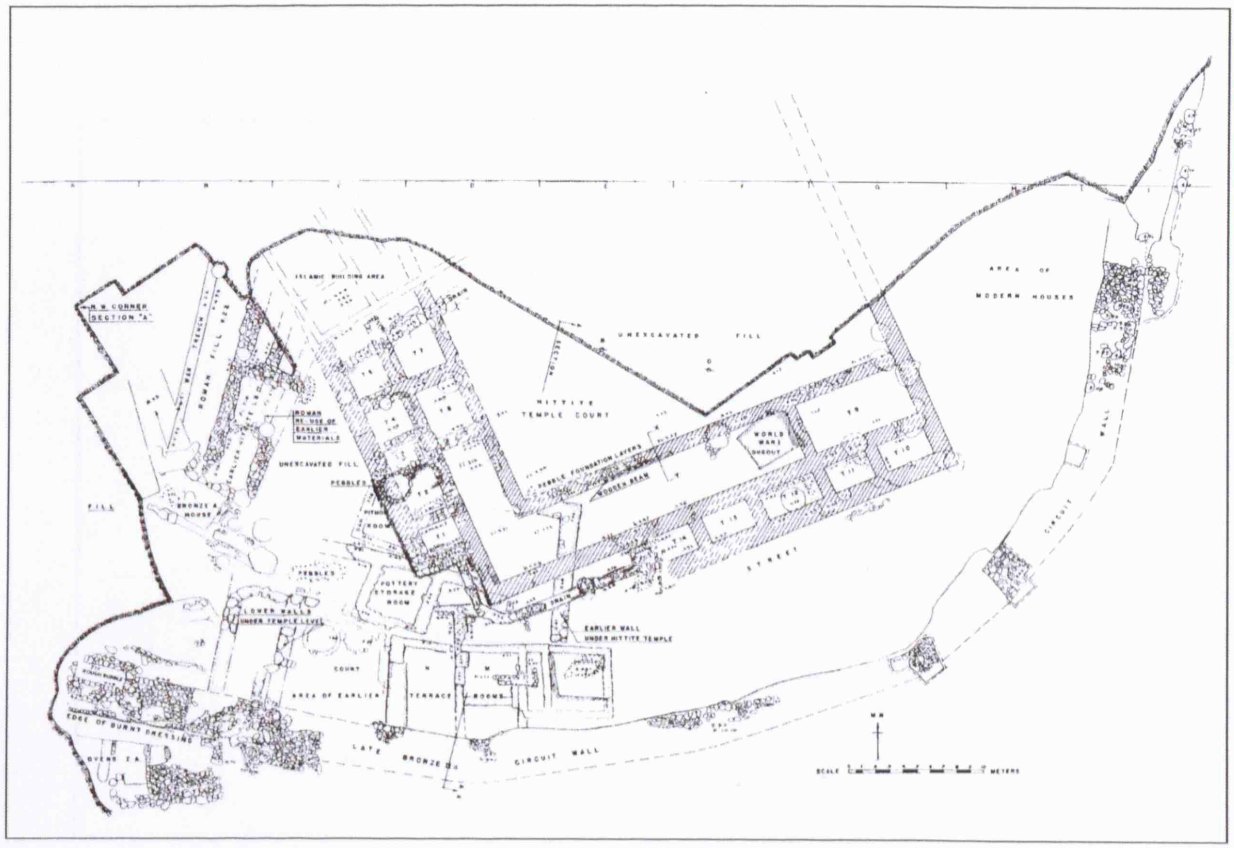
176. *Acropolis trench 8 ; Complex A-4 Phase I plan (Notebook 23, p. 431, 873).*

TARSUS

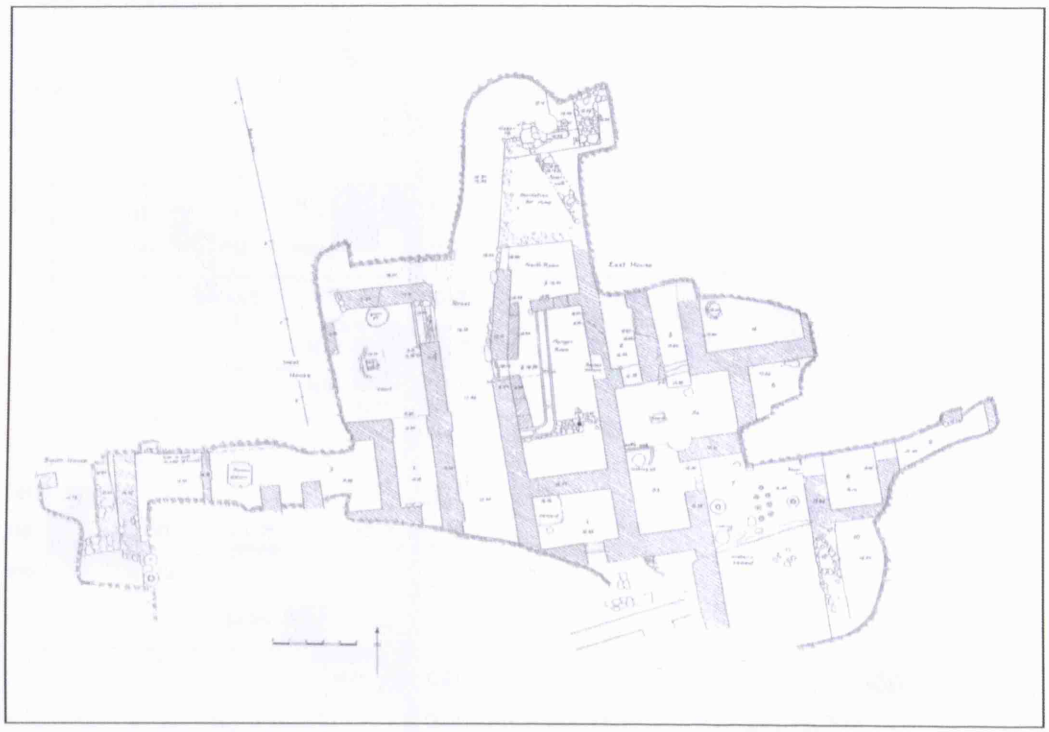
Map 23: Tarsus excavation areas (modified after Goldman 1956, Plan 25)



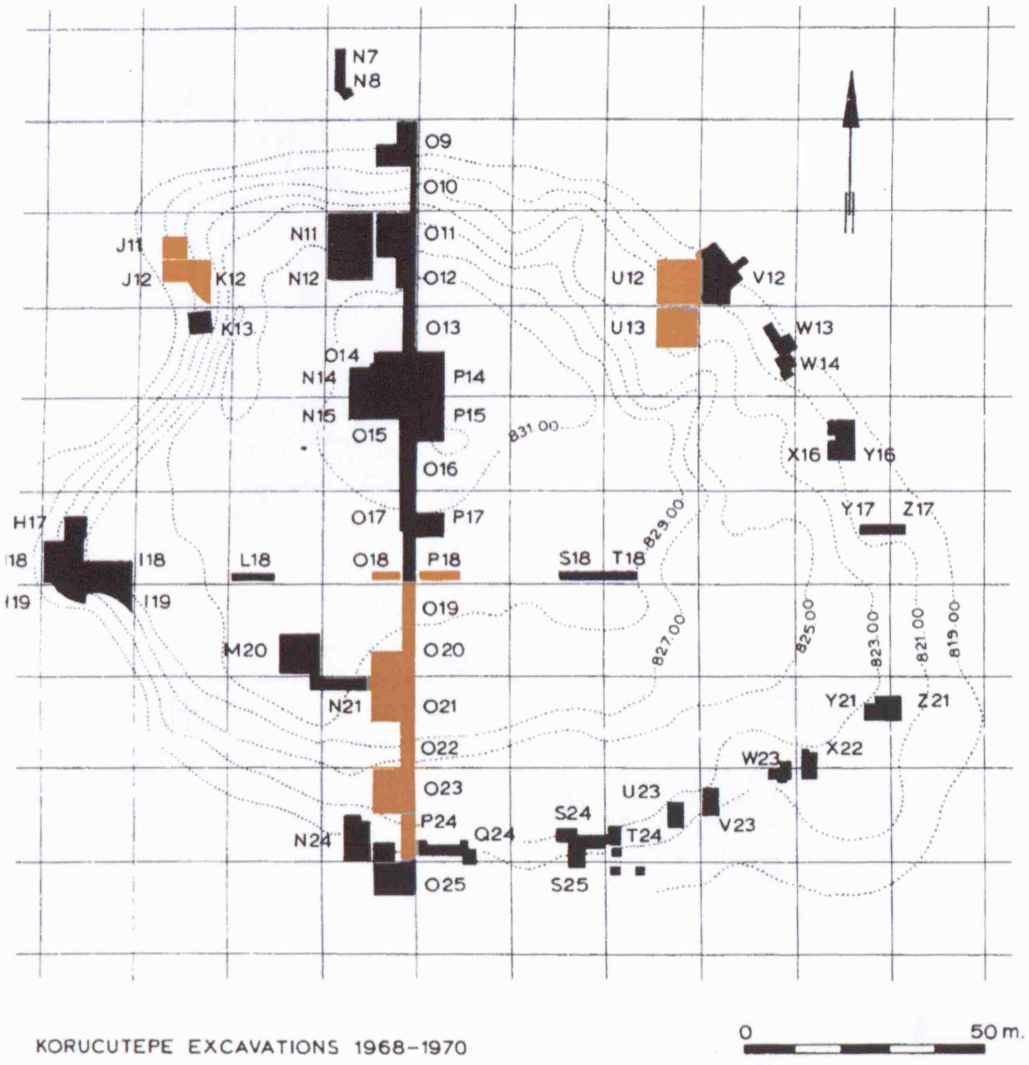
Map 24: Tarsus LBA levels in Section A (after Goldman 1956, Plan 21)



Map 25: Tarsus LBA levels in Section B (after Goldman 1956, Plan 23)

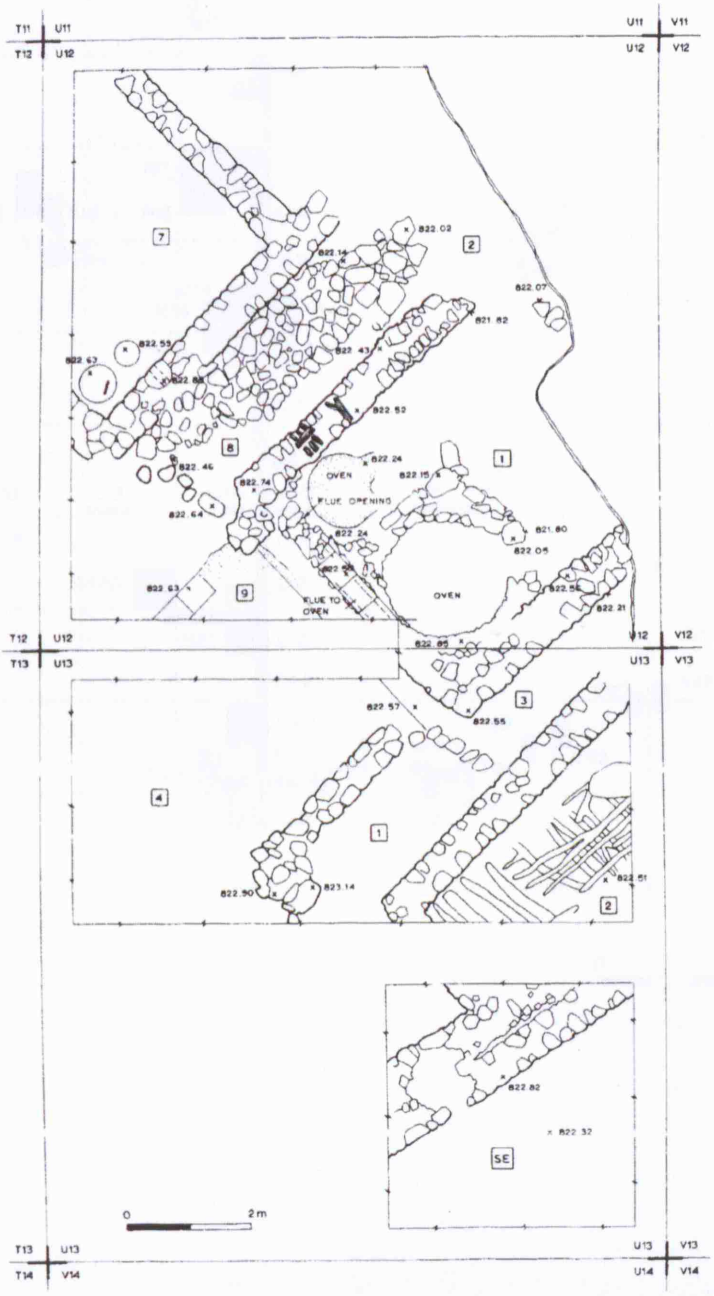


Map 26: Korucutepe excavation areas with Phase I occupation/materials (modified after van Loon 1978, Plate 2)

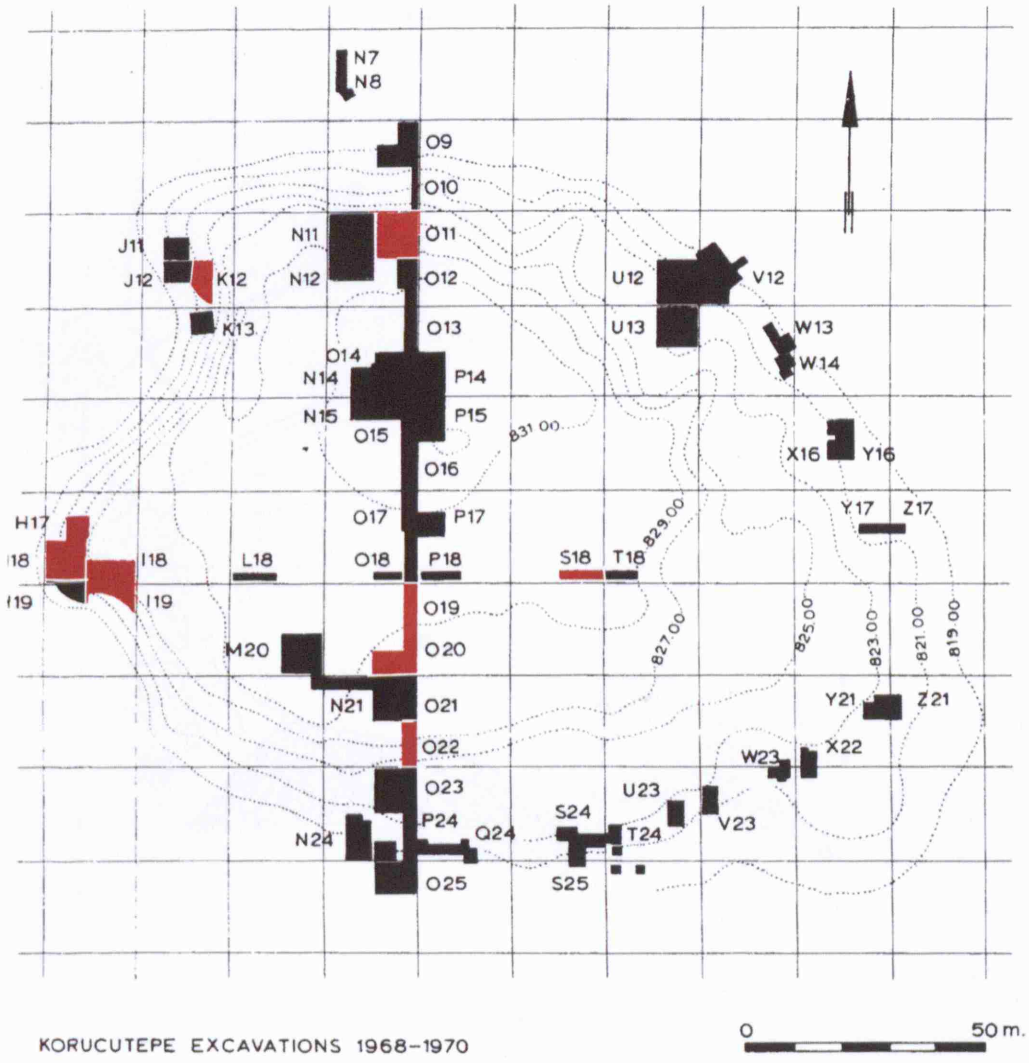


Map 27: Korucutepe Phase I (Stratum CXVIII) in U12-13 (after van Loon 1978, Plate 54)

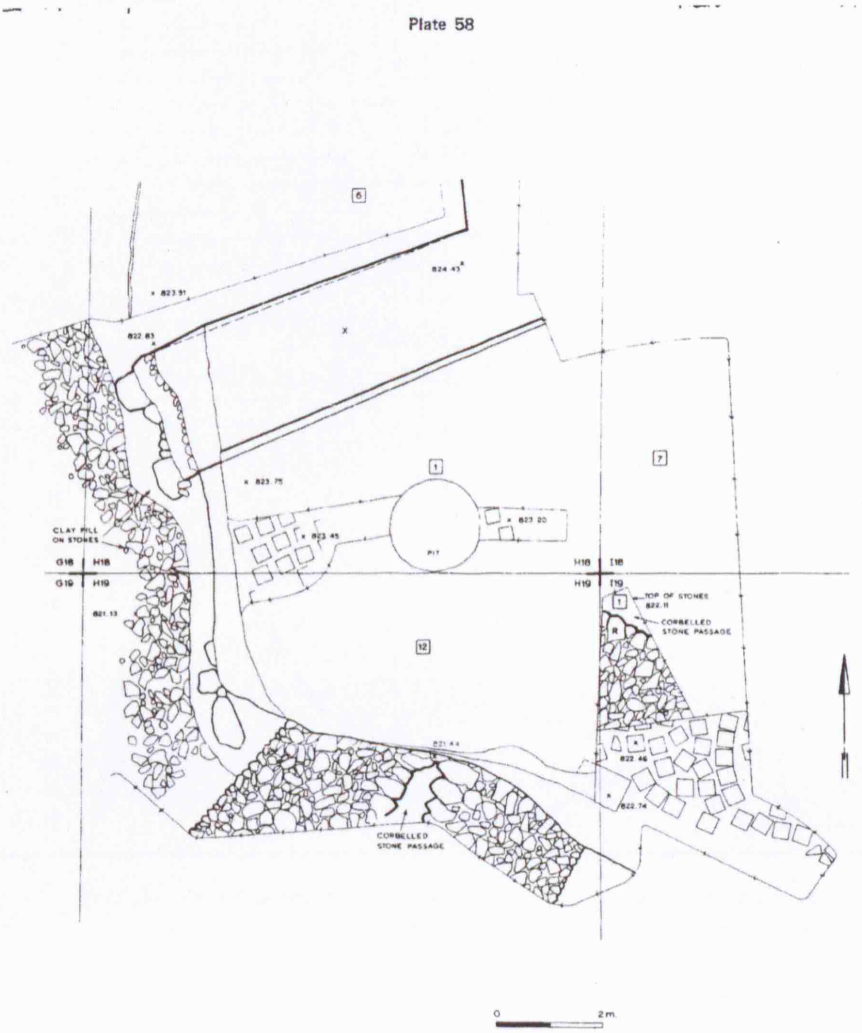
Plate 54



Map 28: Korucutepe excavation areas with Phase J occupation/materials (modified after van Loon 1978, Plate 2)



Map 29: Korucutepe Phase J (Stratum CXXI) in H-I 18-19 (after van Loon 1978, Plate 58)



NORŞUNTEPE

Map 30: Norşuntepe LBA excavation areas (after Korbel 1985, Abb. 3)

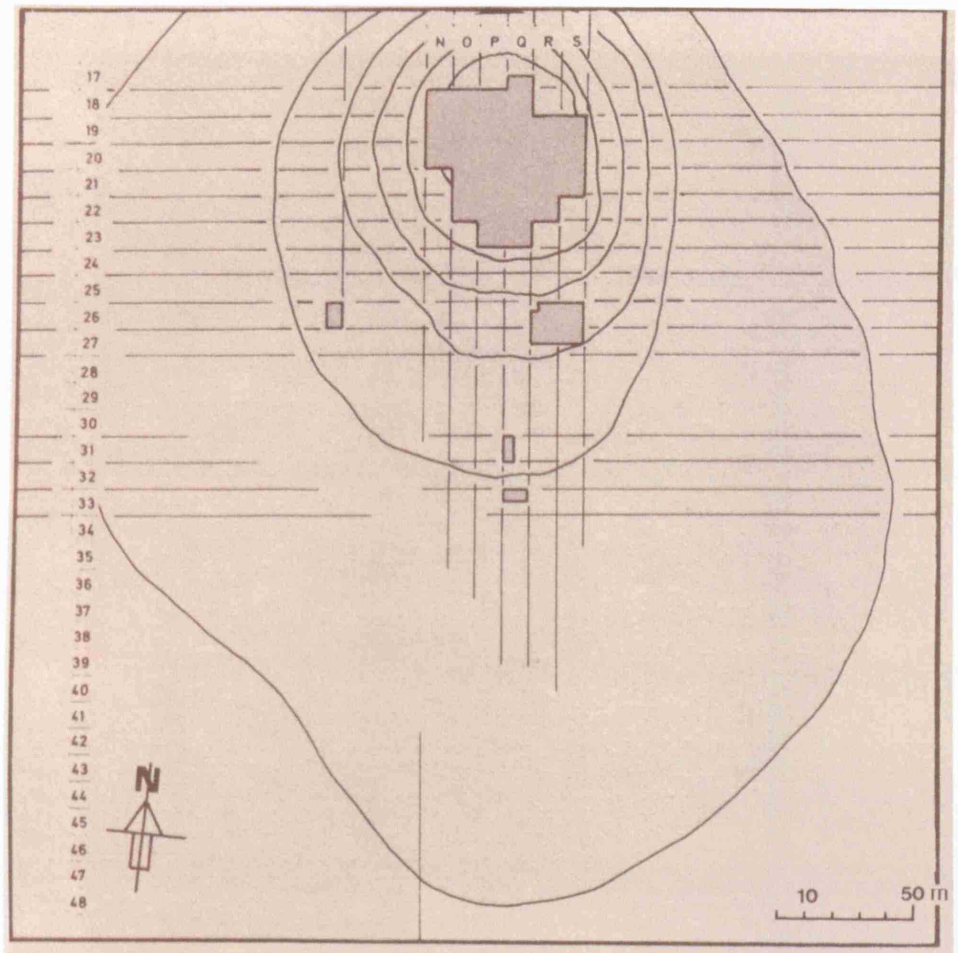
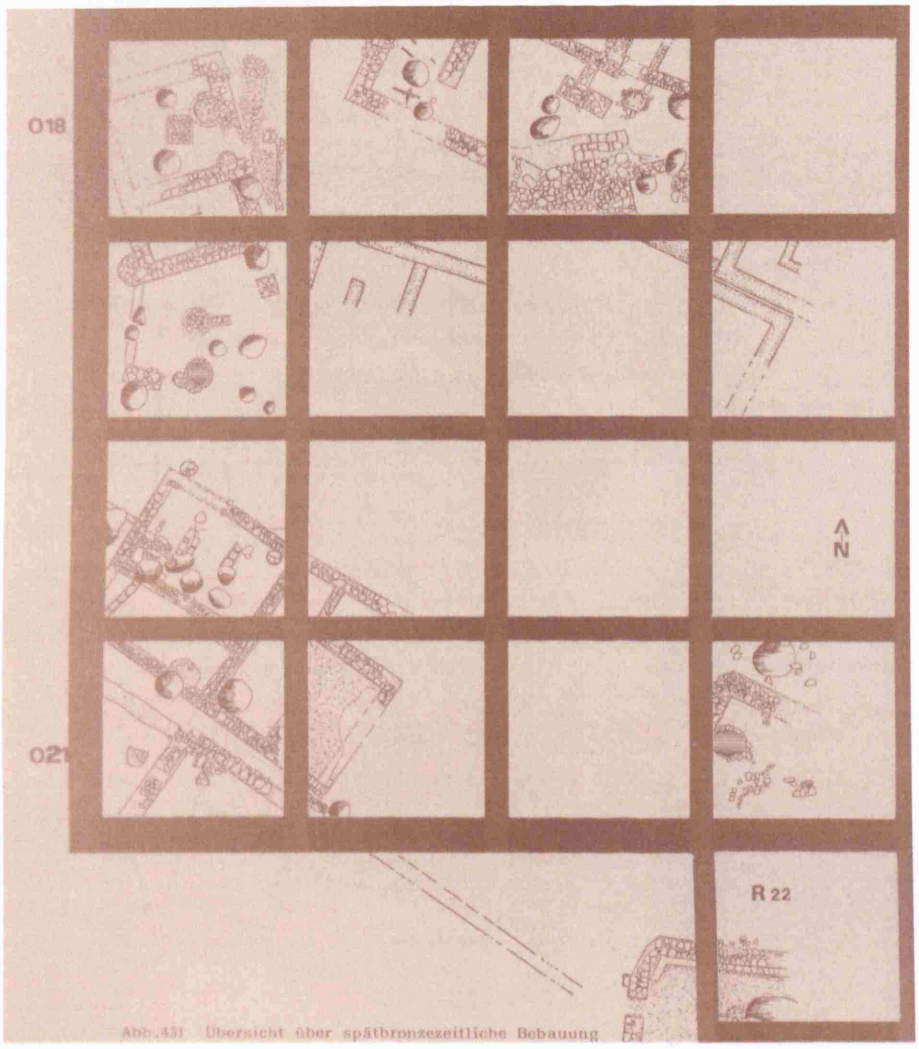


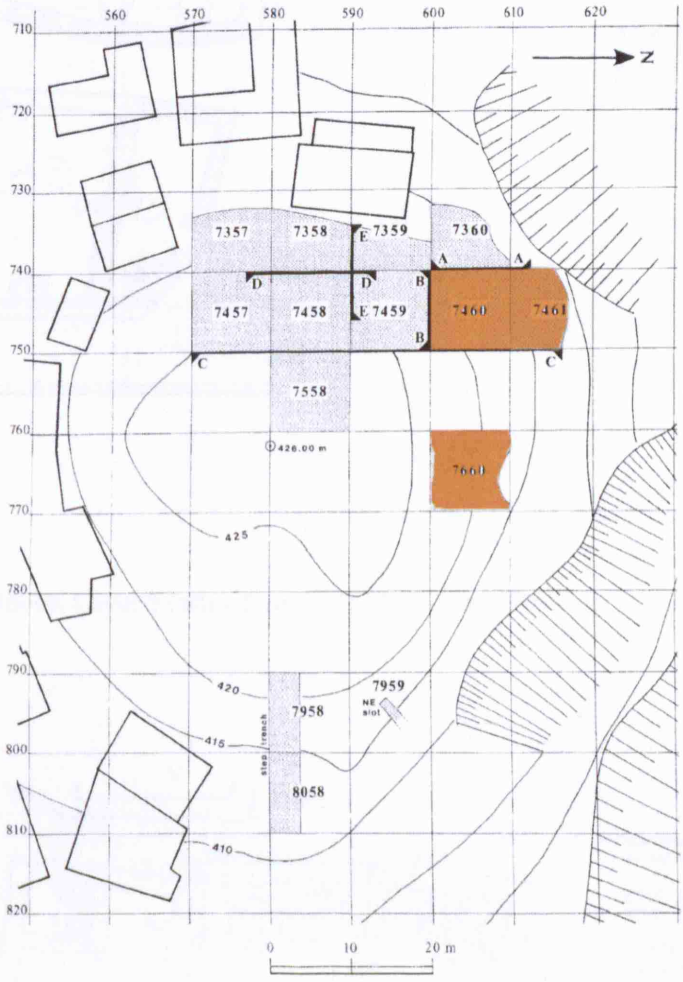
Abb.3 Norşuntepe: Die wichtigsten Grabungsareale mit spätbronzezeitlicher Keramik

Map 31: Norşuntepe LBA excavation areas on the central mound (after Korbel 1985, Abb. 431)

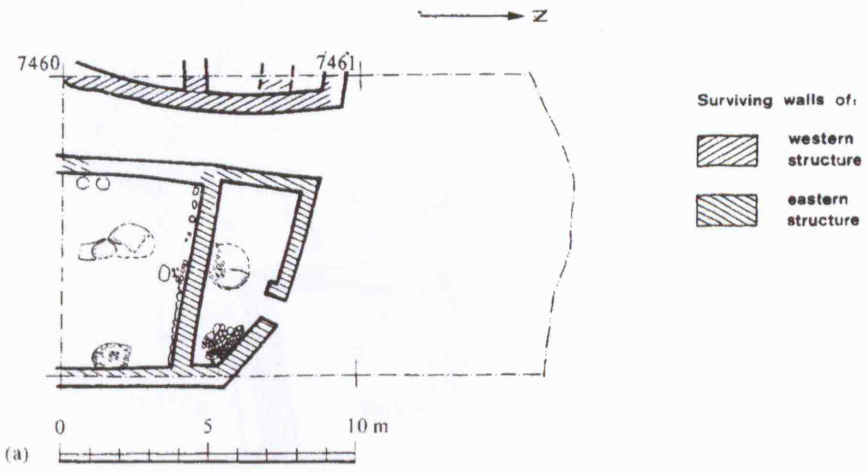


TILLE HÖYÜK

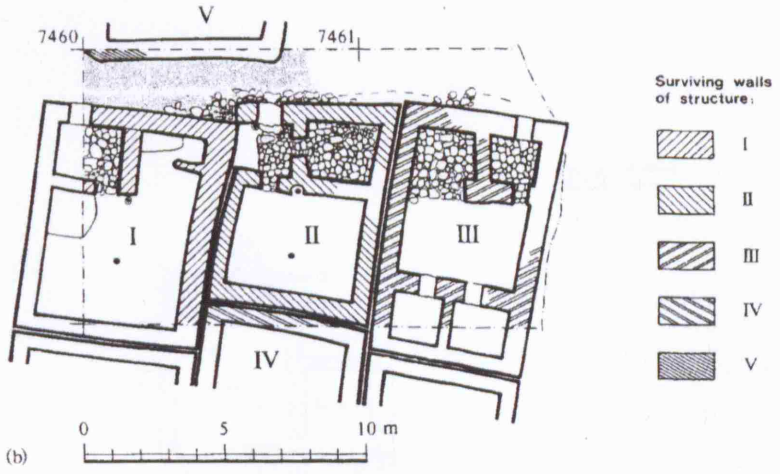
Map 32: Tille Höyük LBA excavation areas (modified after Summers 1993, Fig. 4)



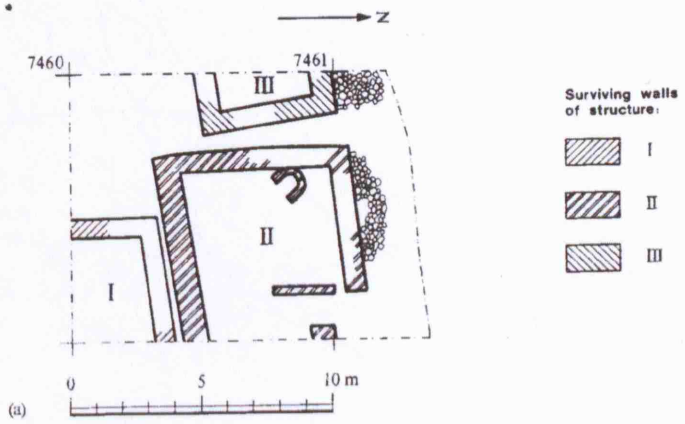
Map 33: Tille Höyük Level 2 (after Summers 1993, Fig. 19a)



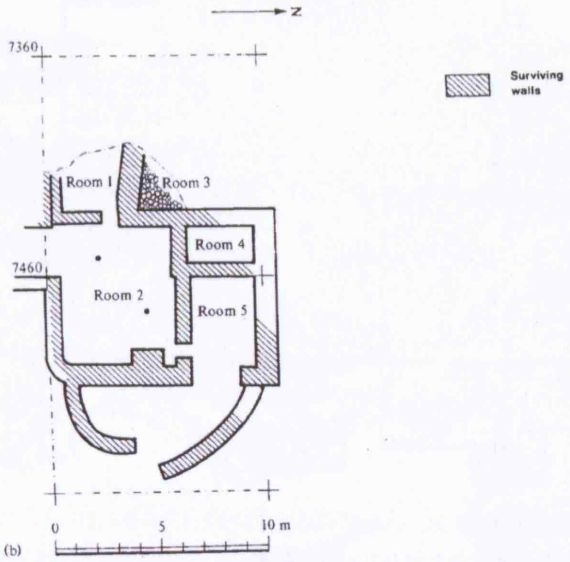
Map 34: Tille Höyük Level 3 (after Summers 1993, Fig. 19b)



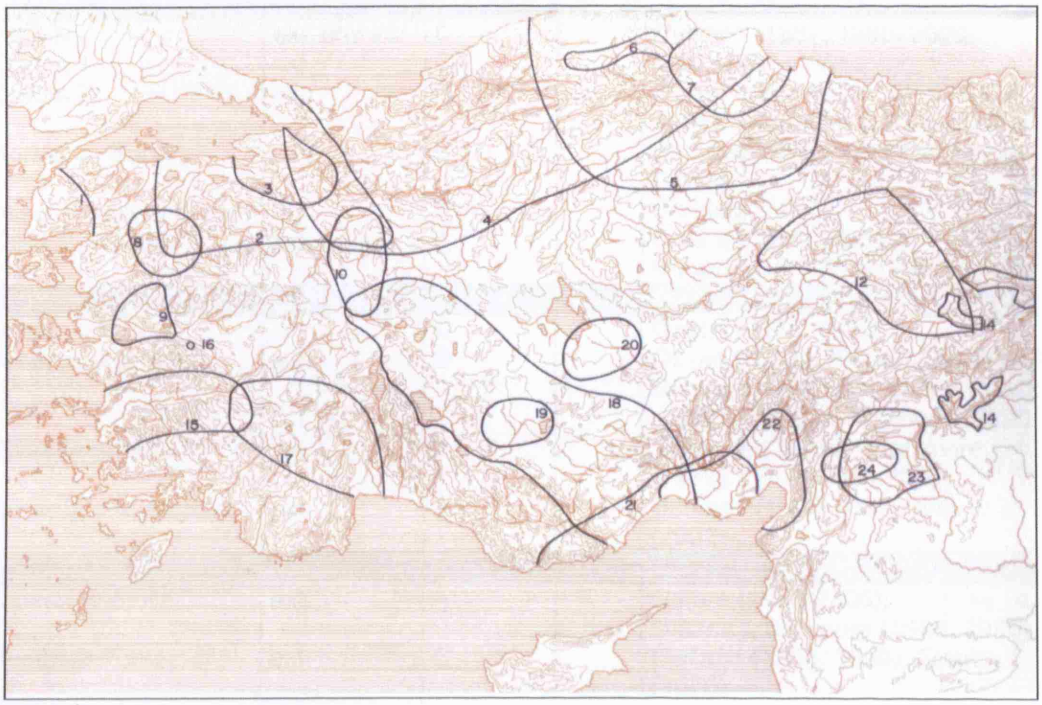
Map 35: Tille Höyük Level 5 (after Summers 1993, Fig. 20a)



Map 36: Tille Höyük Level 9 and 10 (after Summers 1993, Fig. 20b)



Map 37: Atlante storico (after Forlanini and Marazzi 1986, TAV. X)



Map 38: Main survey projects included in this study

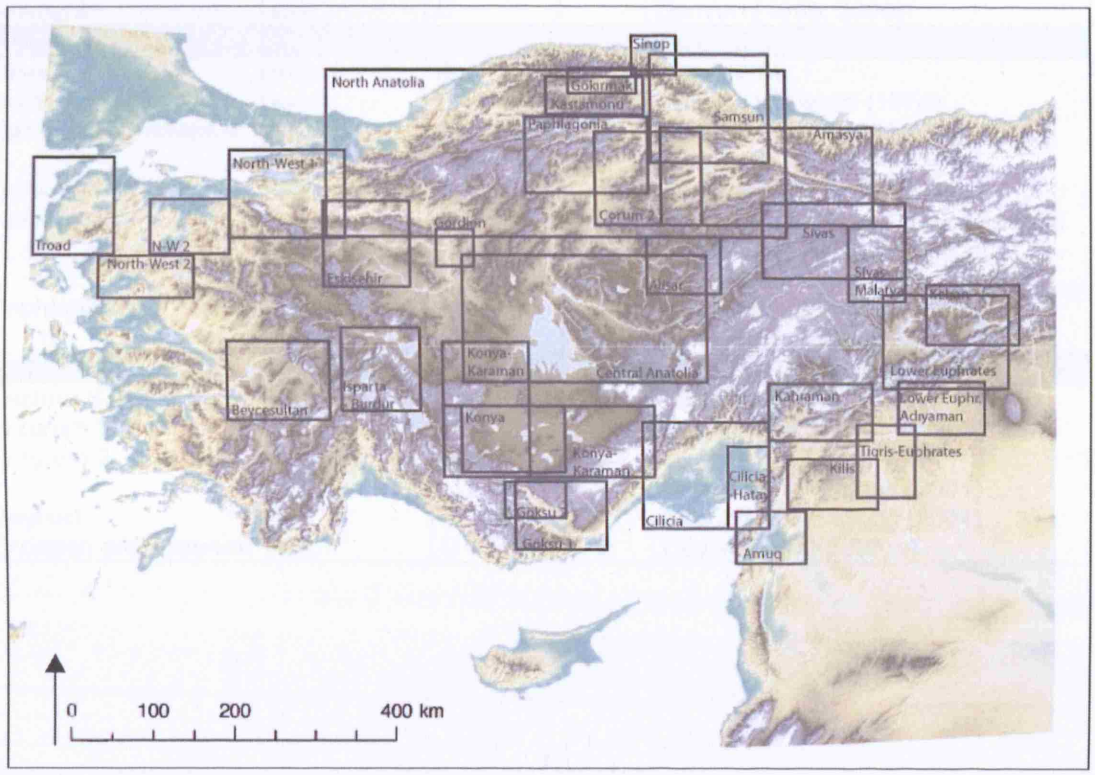


Table 27: Survey projects included in this study

Survey Project	ext./int.	Category	km²	Publications
Region A1				
Hattusa	ext. and int.	C		Czichon (1997, 1998, 2000)
Çorum 1	ext.	C		Süel (1990, 1991)
Çorum 2	ext.	B		Sipahi and Yıldırım (1998-2001, 2005), Yıldırım and Sipahi (2004)
Kerkenes Survey	ext.	C		Summers, Summers and Ahmet (1995)
Alişar Regional Survey	ext.	B		Branting (1996)
Central Anatolia	ext.	A		Omura (1988-2005), Mikami and Omura (1988, 1990)
Region A2				
Vicinity of Maşat		C		Özgüç (1978, 1982)
Amasya and Tokat	ext.	B		Özsait (1988a-2005a), Özsait and Dündar (1997), Özsait and Koçak (1996), Özsait and Özsait (2001)
Sivas Province	ext.	B		Yakar and Gürsan-Salzmann (1979), Ökse (1994-2002)
Samsun and Amasya	ext.	A		Dönmez (1999-2002); Bilgi et al. (2003)
Region A3				
Central Anatolia	ext.	A		Omura (1989-2005), Mikami and Omura (1988, 1990)
Southern Turkey	ext.	C		Mellaart (1958, 1959), French (1970)
Konya-Karaman	ext.	C		Bahar (1996-2005), Bahar and Koçak (2004)
Konya Plain	ext. and int.	C	850	Baird (1996-2002)
Aksaray, Nevşehir, Niğde	ext.	C		Gülçur (1995-2003), Esin, Gülçur and Kurar (1998)
Nevşehir	ext.	C		Şenyurt (1999, 2000)
Region B1				
Sinop	ext.	B		Işin (1998)
North Anatolia	ext.	C		Yakar and Dinçol (1974)
Samsun and Amasya	ext.	A		Dönmez (1999-2002), Bilgi et al. (2003)
Gökirmak	ext.	C		Donceel-Voûte (1979)
Kastamonu	ext.	C		Marro (2000), Marro, Özdoğan and Tibet (1996;1998), Kuzucuoğlu et al. (1997)
Paphlagonia	ext. and int.	A	8500	Matthews (2000a, b), Matthews Pollard and Ramage (1998)
Region B2				
Eastern Borders	ext.	C		Yakar (1992)
Erzurum 1	ext.	C		Güneri (1987)
Erzurum 2	ext. and int.	B		Sagona (1999), Sagona and Sagona (2001)
Bayburt	ext.	B		Sagona and Sagona (2004)
Erzincan and Erzurum	ext.	C		Ceylan (2000-2005)

Survey Project	ext./int.	Category	km²	Publications
Region C1				
Central Anatolia	ext.	A		Omura (1988-2005)
Gordion Regional S.	ext. and int.	A	360	Kealhofer (2005)
Eskişehir	ext.	B		Efe (1990-1997)
North Anatolia	ext.	C		Burney (1956)
Region C2				
Konya-Karaman	ext.	C		Bahar (1996-2005)
Isparta and Burdur	ext.	C		Özsait (1985-2005b)
Beycesultan	ext.	B		Lloyd and Mellaart (1965), Mellaart and Murray (1995)
Region D				
Northwest Anatolia I, II	ext.	C		French (1967, 1969)
Eskişehir	ext.	C		Efe (1990-1997)
Marmara	ext. and int.	C		Özdoğan (1993)
Troad	ext.	B		Rüstem and Bieg (2003)
Beycesultan	ext.	B		Lloyd and Mellaart (1965), Mellaart and Murray (1995)
Region E				
Southern Turkey	ext.	C		Mellaart (1958, 1959), French (1970)
Göksü Valley 1	ext.	C		French (1965)
Göksü Valley 2	ext. and int.	C		Elton (2003, 2004)
Region F				
Cilicia	ext.	B		Seton-Williams (1954)
Cilicia and Hatay	ext.	C		Gates and Özgen (1992)
Kahramanmaraş	ext.	C		Carter (1995, 1996), Carter et al. (1999)
Kilis	ext.	C		Özgen (1986), Özgen, Helwing and Engin (2002, 2004), Özgen et al. (2003)
Region G1				
Sivas and Malatya	ext.	C		Yakar and Gürsan-Salzmann (1979)
Region G2				
Eastern Turkey	ext.	C		Russell (1980)
Malatya	ext.	C		Di Noccera (2005)
Keban Dam	ext. and int.	A	680	Whallon (1979)
Lower Euphrates 1	ext.	B		Serdaroğlu (1977)
Lower Euphrates 2	ext.	A		Özdoğan (1977)
Region H				
Adıyaman Dam	ext.	B		Blaylock, French and Summers (1990)
Titriş Höyük	ext.	B		Algaze et al. (1992)
Tigris-Euphrates	ext. and int.	A	186	Algaze (1989), Algaze, Breuninger and Knudstad (1994)
South East Anatolia	ext. and int.	A		Wilkinson (1990)
Region I				
Şanlı Urfa - Harran - Soruç	ext.	C		Yardımcı (1991-2005)
Tigris-Euphrates	ext. and int.	A	186	Algaze, Breuninger and Knudstad (1994)
Diyarbakır	ext.	C		Peasnall (2004)
Batman River	ext. and int.	B		Rosenberg and Togul (1991)

Survey Project	ext./int.	Category	km²	Publications
Region J				
Amuq Valley	ext. and int.	A		Yener et al. (2000), Casana and Wilkinson (2005)
Orontes Delta	ext. and int.	B		Pamir (2005)
Umm el-Marra	ext.	B		Schwartz et al. (2000)
Tabqa Dam S.	ext.	B		Van Loon 1967
Balikh		B		Akkermans (1984), Lyon (2000)
Homs Survey	ext. and int.	C		Philips et al. (2002)

N.B.: see Appendix 2 for the database of LBA sites from systematic surveys
Category A:
Systematic extensive surveys, often with intensive components. Recorded information includes site-size, distribution maps, detailed dating (MBA/LBA or even OH-MH/Empire), at least some illustrations of collected material.
Category B:
a) Systematic extensive surveys, which either cover a very small area or are conducted in a larger area but over only one or two seasons, thus calling into question the density of survey coverage.
b) Systematic extensive surveys, which do not consistently include information about site-sizes and which use differential periodisations, which makes the synchronisation of sites within survey areas and between them difficult.
Category C:
a) Extensive explorations often of earlier date, where large areas were covered in a non-systematic manner and sites were recorded more or less hazardously.
b) Systematic extensive surveys of relatively early date, whose results have either been verified or revised by more recent research.
c) More recent surveys, which do not include even basic information such as distribution maps or survey reports, which consistently use too broad chronological categories (e.g. 3rd, 2nd and 1st millennium BC)
d) Recently begun surveys for which few or too general preliminary reports are available to date. In these cases, the proposed classification is likely to require revision in the future.

Table 28: "Weighting" factors/quotients based on the approximate duration of each period

Dates (BC)	Period	Time Span 1 (years)	"weighting" factor 1	Time Span 2* (years)	"weighting" factor 2
5500 - 3000	CHA	2500	25		
3000 - 1900	EBA	1100	11		
2nd millennium		1000	10		
1900 - 1600	MBA	300	3	(MBA-OH) 500	5
1600 - 1180	LBA	420	4,2.	(EP) 200	2
1650 – 1350	OH (-e EP)	300	3		
1350 – 1180	EP	170	1,7		
ca. 1100 - 500	IA	600	6		

** Central Anatolia, Samsun and Amaysa and Sivas surveys include the OH period in the MBA (18th-15th centuries BC)*

Table 29: Site classifications in a) Central Anatolia and b) in the Keban area (Whallon 1979, 264)

a) size range (ha)	b) size range (ha)	classification	possible function
< 1.5	< 1.25	small	hamlet – small village
1.5 – 2.5	1.25 – 2.15	medium	village
2.5 - 8	2.15 – 5	large	town
> 8	> 8	major	regional centre
180	180		imperial capital

Table 30: Summary of chronological site distributions

Region	Survey	CHA	3rd m. EBA	2nd m.	MBA MBA-OH	LBA LBA (Empire)	IA	Total
	Anatolia Total	**619**	**1552**	**1197**	**612**	**647**	**1055**	**2211**
A1								
	Çorum 1		9	19		1	15	19
	Çorum 2	1	69	41		14	41	80
	Alişar Regional Survey	12	9 (EB III)	21			20	-
	Central Anatolia (Yozgat)	2	15		12	6	11	17
	Central Anatolia (Kırıkkale)	3	16		8	7	14	19
	Central Anatolia (Kirşehir)	49	86		58	50	98	134
A2								
	Amasya	18	122	57 (total)	23	17	52	135
	Tokat	10	48	33 (total)	16	8	32	59
	Sivas	70	125	81 (total)	52	58	91	223
A3								
	Central Anatolia (Ankara south)	29	67		52	41	68	97
	Central Anatolia (Konya)	18	53		27	51	71	111
	Central Anatolia (Aksaray)	2	35		14	16	22	61
	Central Anatolia (Nevşehir)	5	6		3	2	5	9
	Central Anatolia (Niğde)	-	-		1	-	1	1
	Central Anatolia (Kayseri)	2	3		3	2	3	3
	Konya and Karaman	93	177	133	75	89	133	240
	Konya Survey				17	22		

Region	Survey	CHA	3rd m.	EBA	2nd m.	MBA	MBA-OH	LBA	LBA (Empire)	IA	Total
B1											
	Paphlagonia	6		26		14		22		19	
	Kastamonu					8		3			
	Sinop	10		37 (+4)		5 (+3?)		0		3	
	Samsun	14		44		24		4		14	47
B2											
	Bayburt					29		11			
C1											
	Central Anatolia (Ankara)	4		33			23		20	32	44
	Gordion Survey	2?		7		11			10	16*	??
	Eskişehir (Burney)		20	11						14	57
	Eskişehir-Kütühaya	39	159	85						52	188
C2											
	Isparta and Burdur	12		27	18	10		3		18	111
D											
	İznik	6		24	18						26
	Balikesir	5		13	5						14
	Akhisar/Manisa	9		24	15						29
	Troad	6?		17?	25					3?	
E											
	Göksu 1	2		10	6						10
F											
	Cilicia	34		42		38		65		60	96
	Kilis	37		46		39		40		42	56
	Kahramanmaraş			34	36					22	127

Region	Survey	CHA	3rd m. EBA	2nd m.	MBA MBA-OH	LBA LBA (Empire)	IA	Total
G1								
	Sivas and Malatya (south)		6	8?	1? 4?			
G2								
	Malatya Survey	4	18	12			1	18
	Earlier G2 Surveys	39	81		42	51	60	99
J1								
	Amuq Survey	33	64	68	28	17	53	102
J2								
	Jabbul Plain	13	47		33	11	34	

Table 31: Summary of site-size distributions

Region	Survey Project	Periods	Small	Small est.	Medium	Medium est.	Large	Large est.	Major	Major est.	Total
A1											
	Çorum 1										
		EBA	30		4		10		1		45
		2nd m.	24		3		8		1		36
		MBA	?		?		?		?		?
		LBA (OH)	5		2		4		-		11
		IA	23		2		6		1		32
	Central Anatolia										
		EBA	66		22		19		4		111
		MBA-OH	47		13		12		2		74
		LBA (Empire)	31		16		11		2		60
		IA	72		22		19		3		116
A3											
	Central Anatolia										
		EBA	94		38		30		5		167(+1)
		MBA-OH	68		21		23		2		114
		LBA	63		22		29		4		118
		IA	103		41		45		6		195
G2											
	East Anatolia Surveys										
		EBA	44	58	12	7	9	-	1	-	66
		MBA	27	33	5	5	6	1	1	-	39
		LBA	30	39	9	9	9	2	1	1	49
		IA	34	45	8	8	8	-	1	-	57

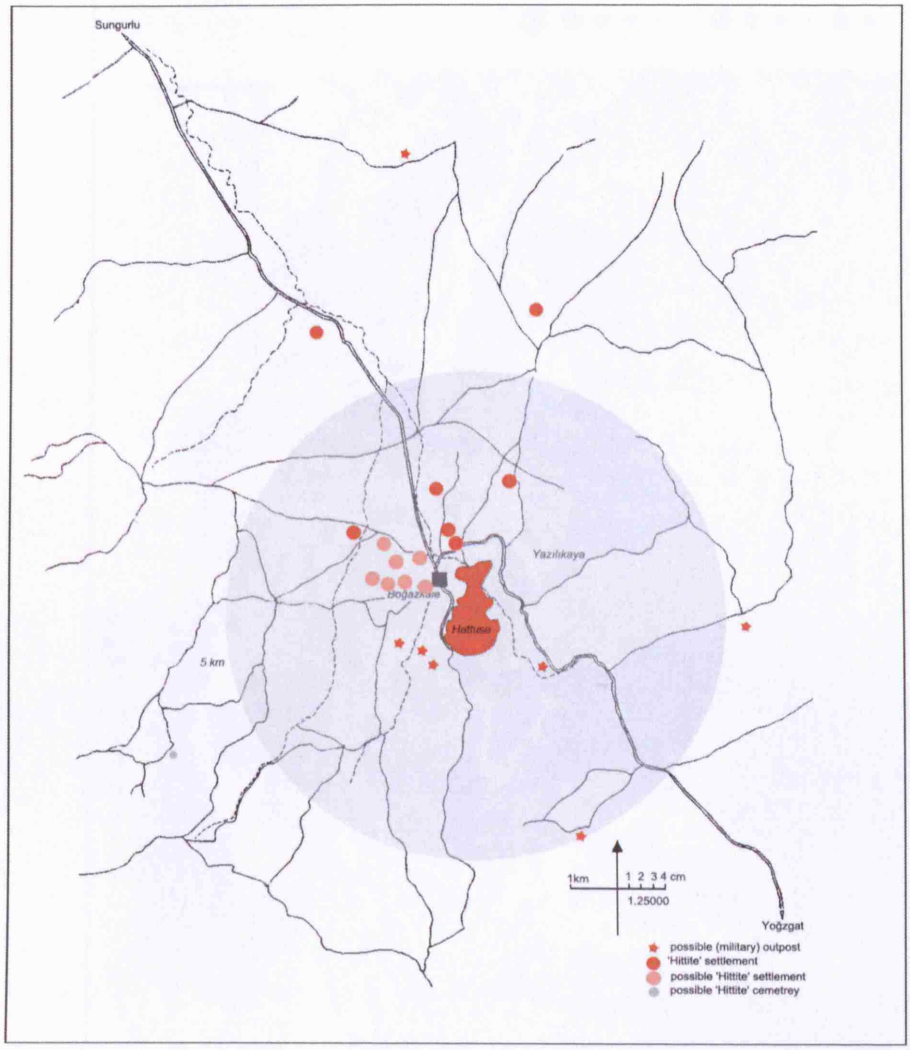
Table 32: Summary of site numbers, aggregate site areas and population estimates

	CHA	EBA	MBA-OH	LBA	IA	Total
Region A1 (south)	54	117	78	63	123	170
Yozgat	2	15	12	6	11	17
Kırıkkale	3	16	8	7	14	19
Kirşehir	49	86	58	50	98	134
Sites (with dimensions):	49	111	74	60	116	158
Aggregate settlement area (ha)	63	224	146	127	231	
Population 1 (100p/ha)	6,300	22,400	14,600	12,700	23,100	
Population 2 (250p/ha)	15,750	56,000	36,500	31,750	57,750	
	CHA	**EBA**	**MBA-OH**	**LBA**	**IA**	**Total**
Region A3	60	197	123	132	202	326
Ankara (north)	4	33	23	20	32	44
Ankara (south)	29	67	52	41	68	97
Konya	18	53	27	51	71	111
Aksaray	2	35	14	16	22	61
Nevşehir	5	6	3	2	5	9
Niğde	-	-	1	-	1	1
Kayseri	2	3	3	2	3	3
Sites (with dimensions):	49	168	114	118	196	265
Aggregate settlement area (ha)	117	400*	254	291	467	
Population 1 (100p/ha)	10,700	40,000	25,400	29,100	46,700	
Population 2 (250p/ha)	29,250	100,000	63,500	72,750	116,750	
	CHA	**EBA**	**MBA**	**LBA**	**IA**	**Total**
Region G2	39	81	42	51	60	99
Sites (with dimensions):	36	66	39	48	51	82
Aggregate settlement area (ha)	54.5	95.6	64.2	80.1	75	
Est. Aggregate site area (ha)	28.5	44	25.5	43.6	35.7	
Population 1 (100p/ha)	5,450	9,560	6,420	8,010	7,500	
Population 2 (250p/ha)	13,625	23,900	16,050	20,025	18,750	

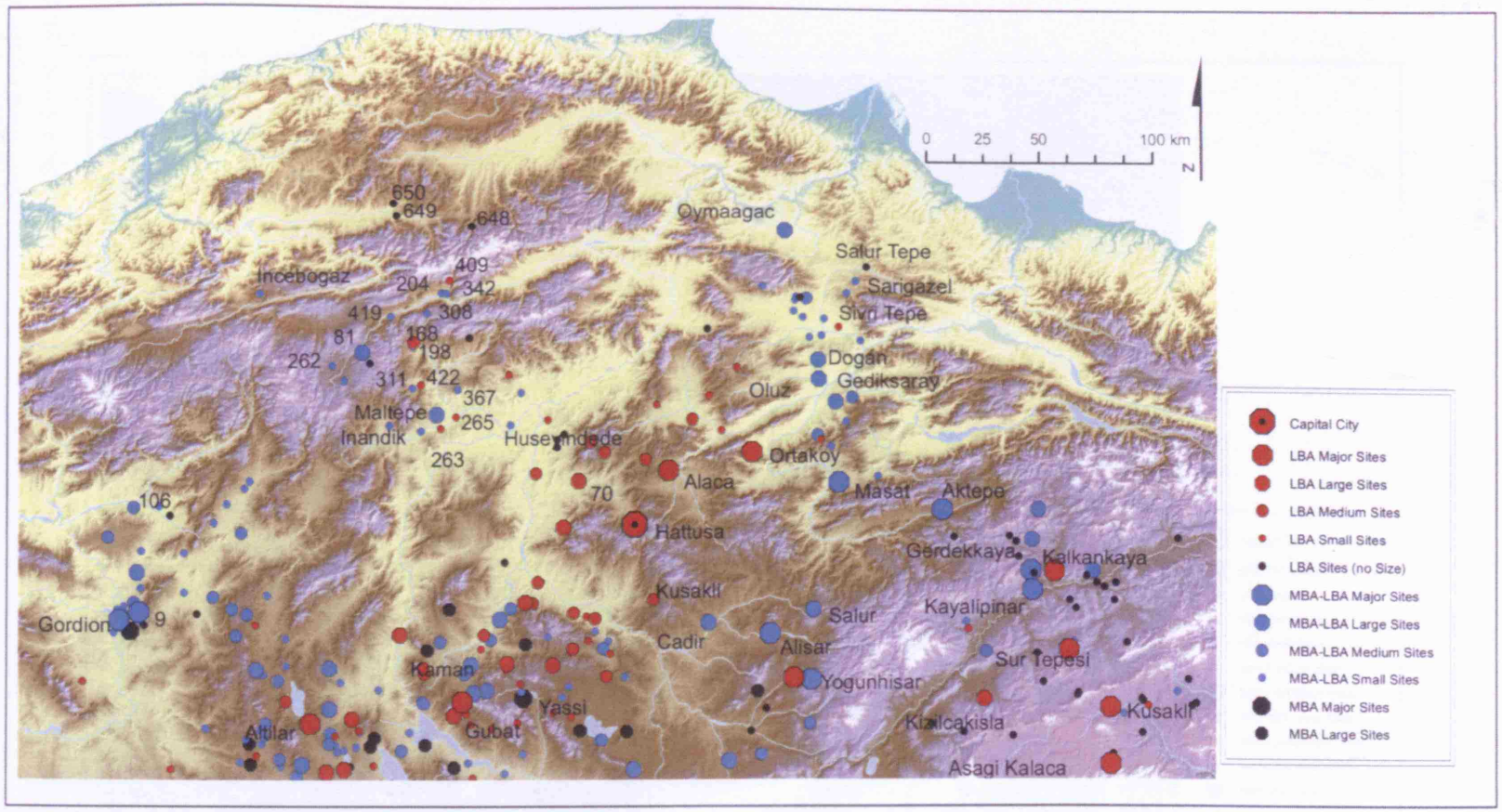
N.B. : The total of sites counted is not the total of sites recorded by the survey but the sum of sites with either CHA, BA or IA materials or a combination thereof.

** The 42 ha site of Hoda Üstü (Omura 2005, Nr. 04-07) was not included as it dates mostly to the Roman period.*

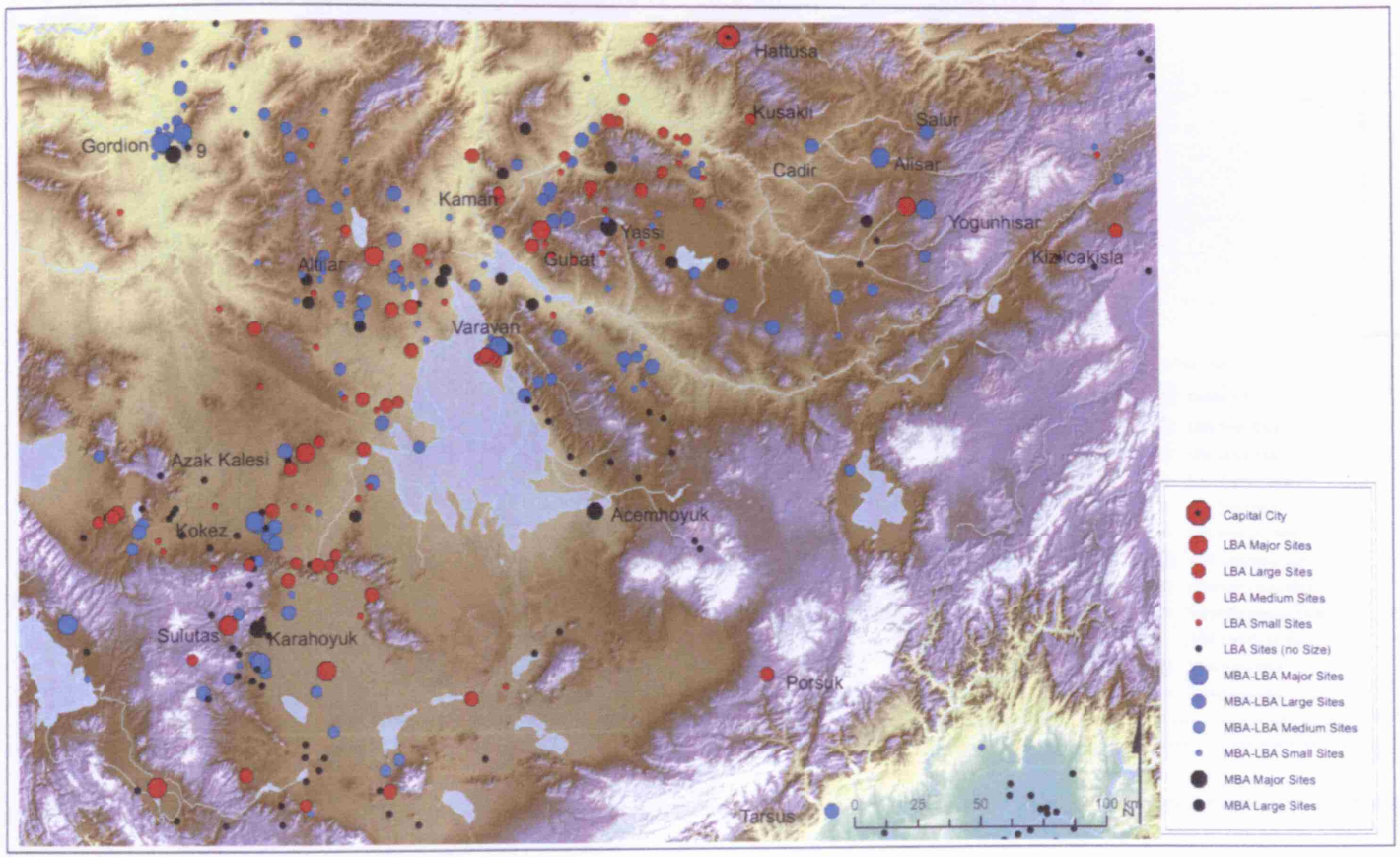
Map 39: Boğazköy-Hattusa hinterland (modified after Czichon 1998)



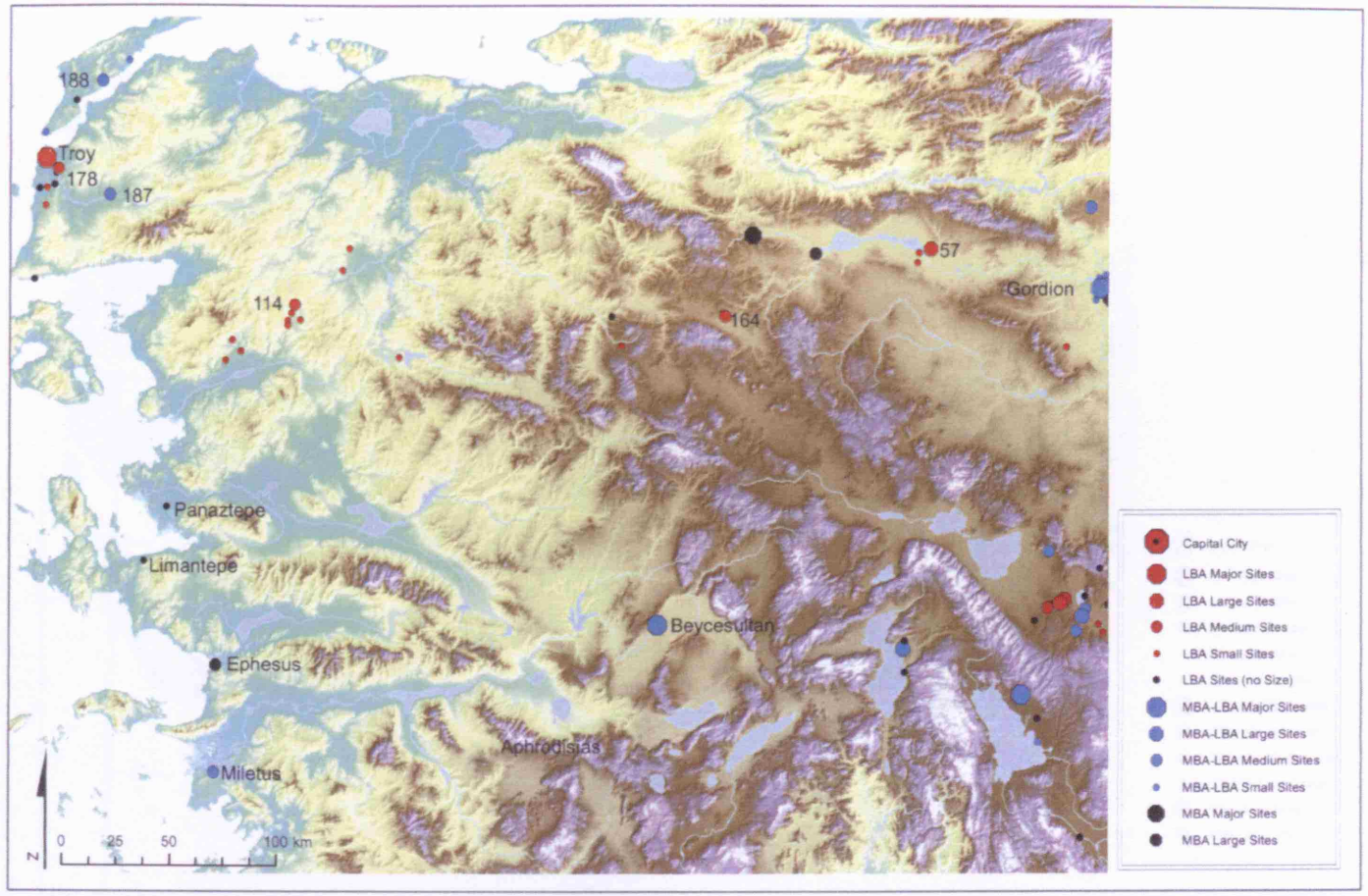
Map 40: LBA settlement in north-central Anatolia



Map 41: LBA settlement in south-central Anatolia

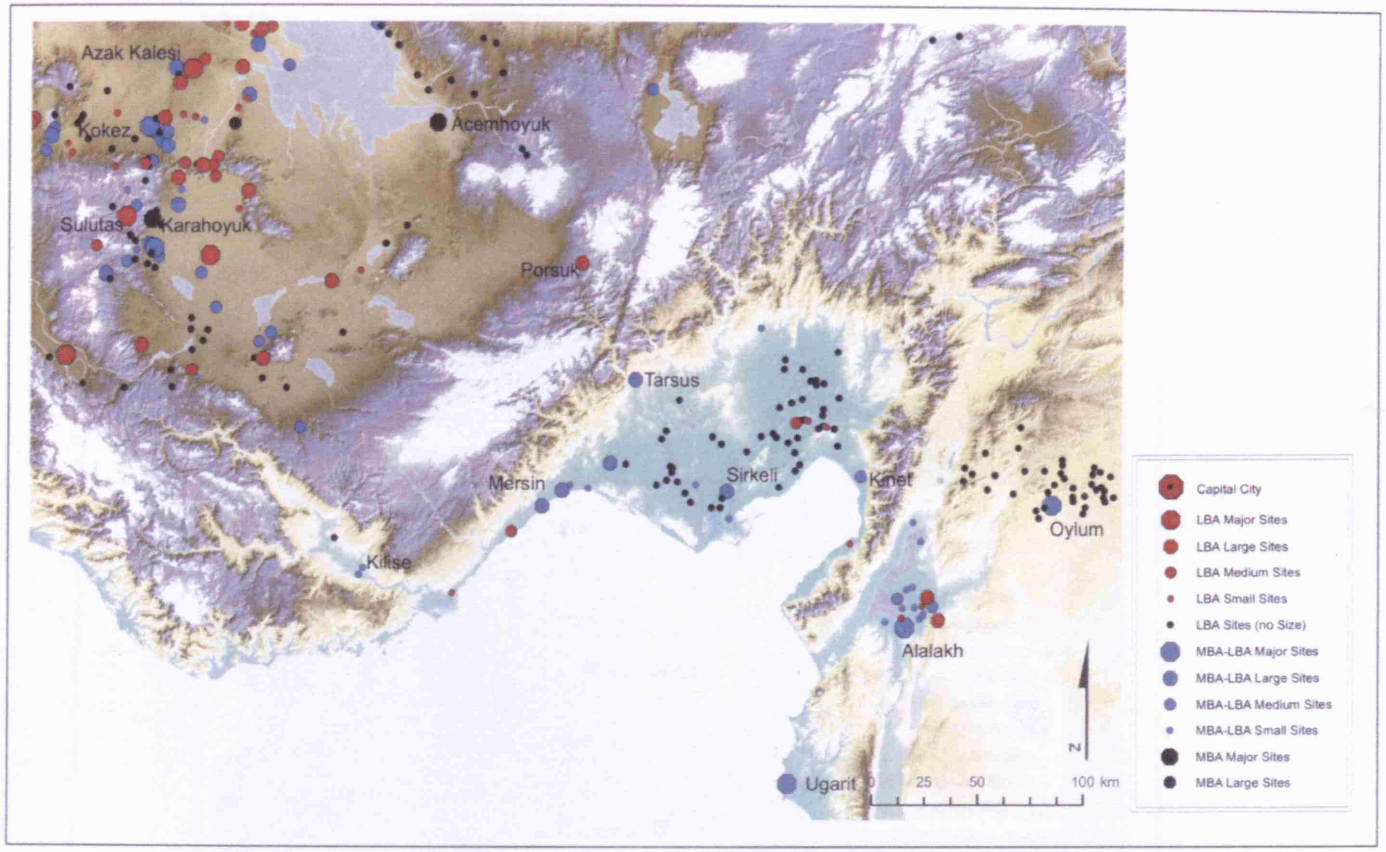


Map 42: LBA settlement in western Anatolia

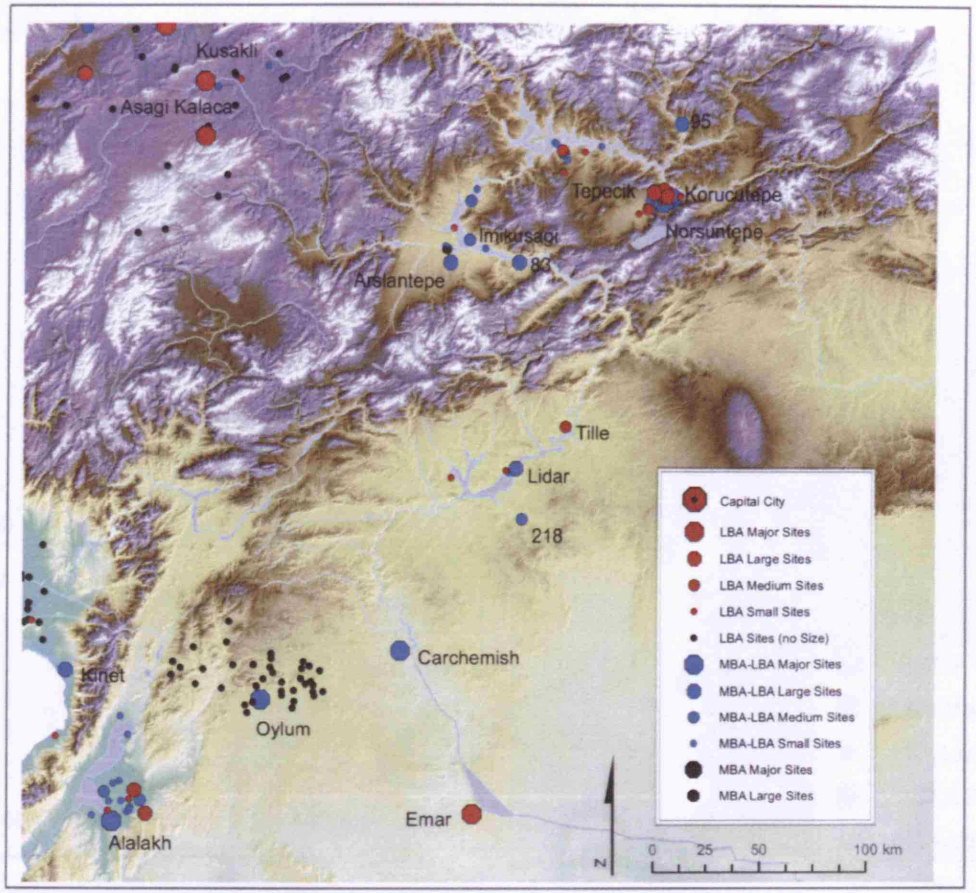


N.B.: Survey sites listed in Mellaart and Murray (1995, Maps 1 to 4) are not included here because of the difficulty in translating site-locations from the original line-drawings.

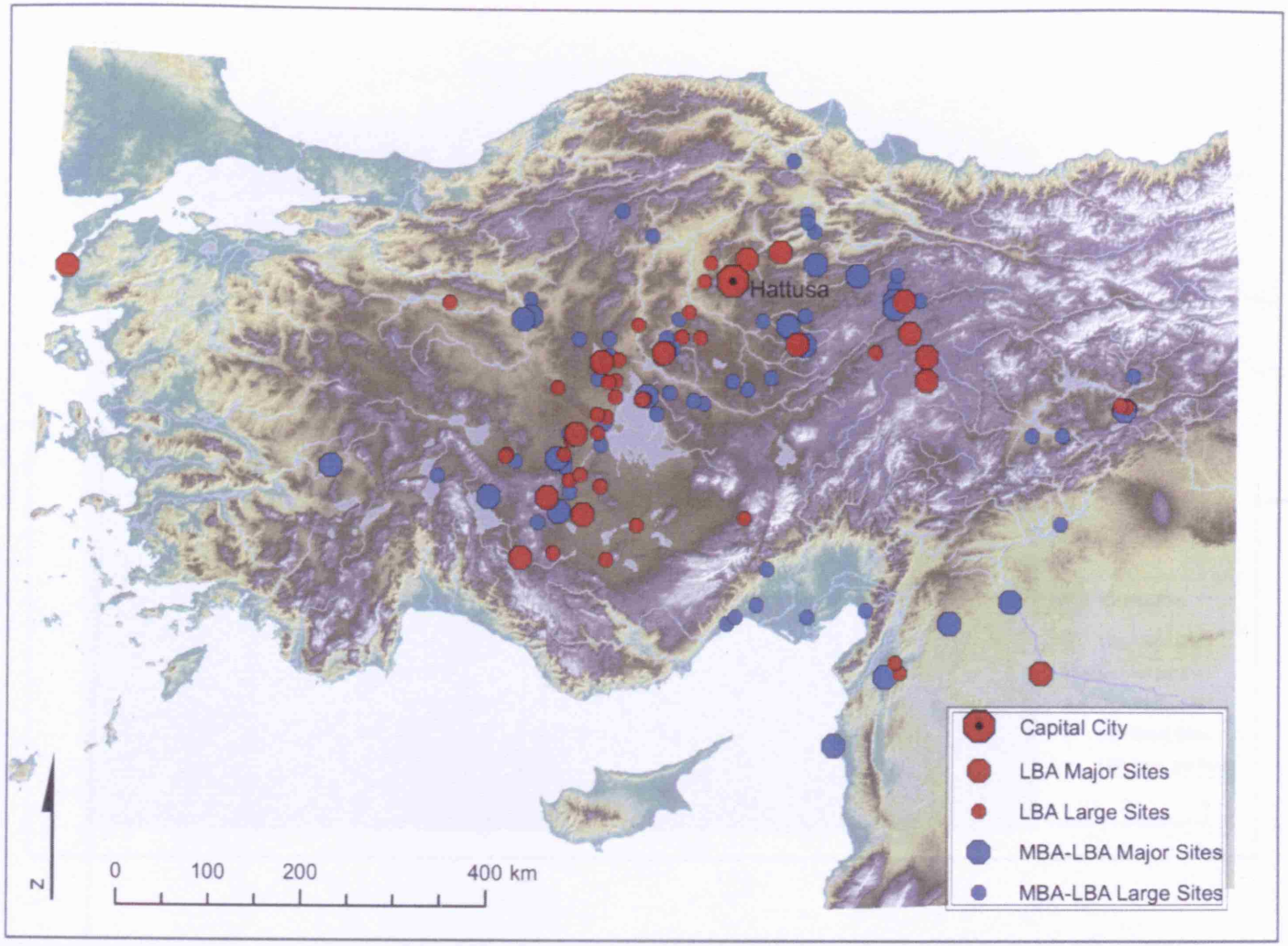
Map 43: LBA settlement in southern Anatolia



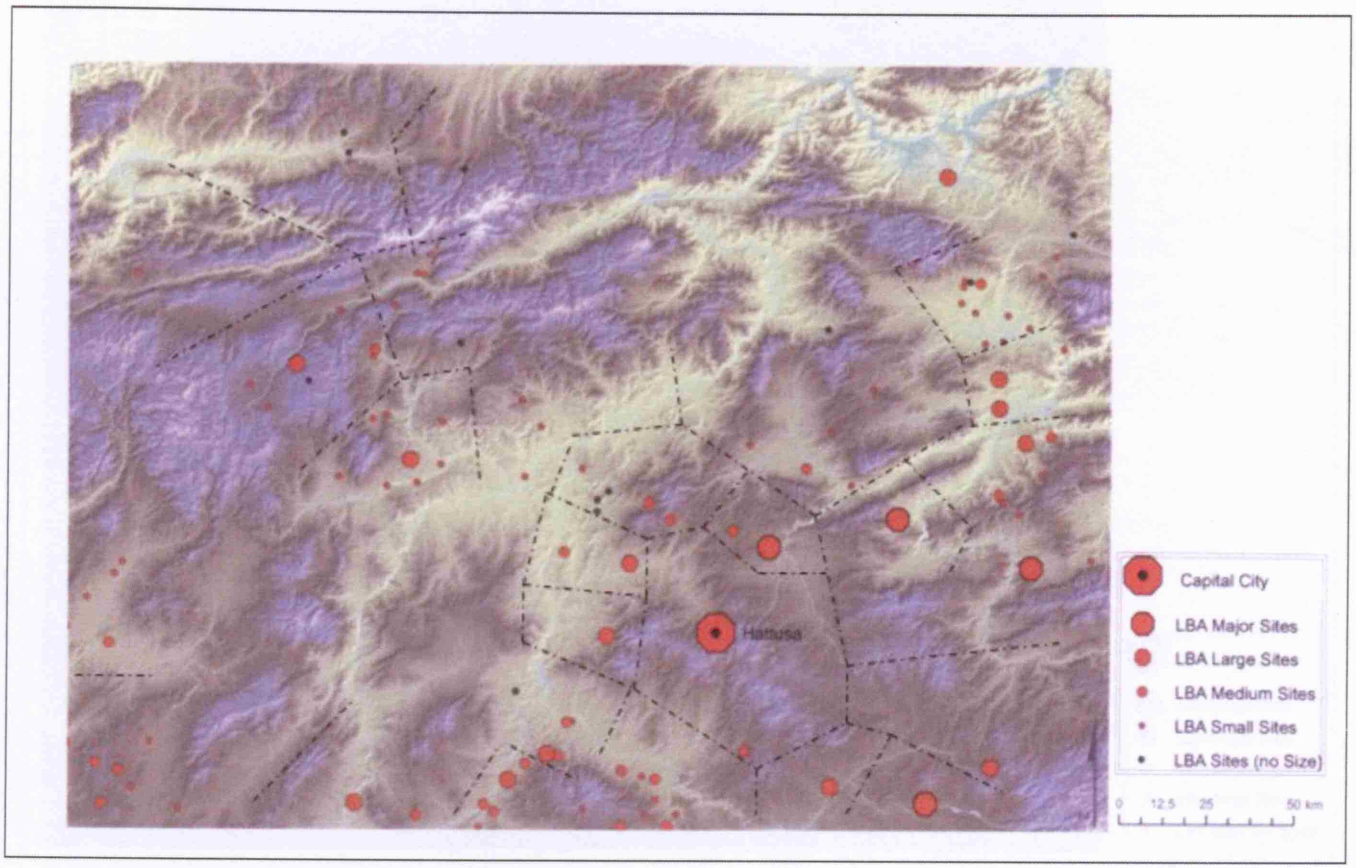
Map 44: LBA settlement in eastern Anatolia



Map 45: Large and major LBA sites

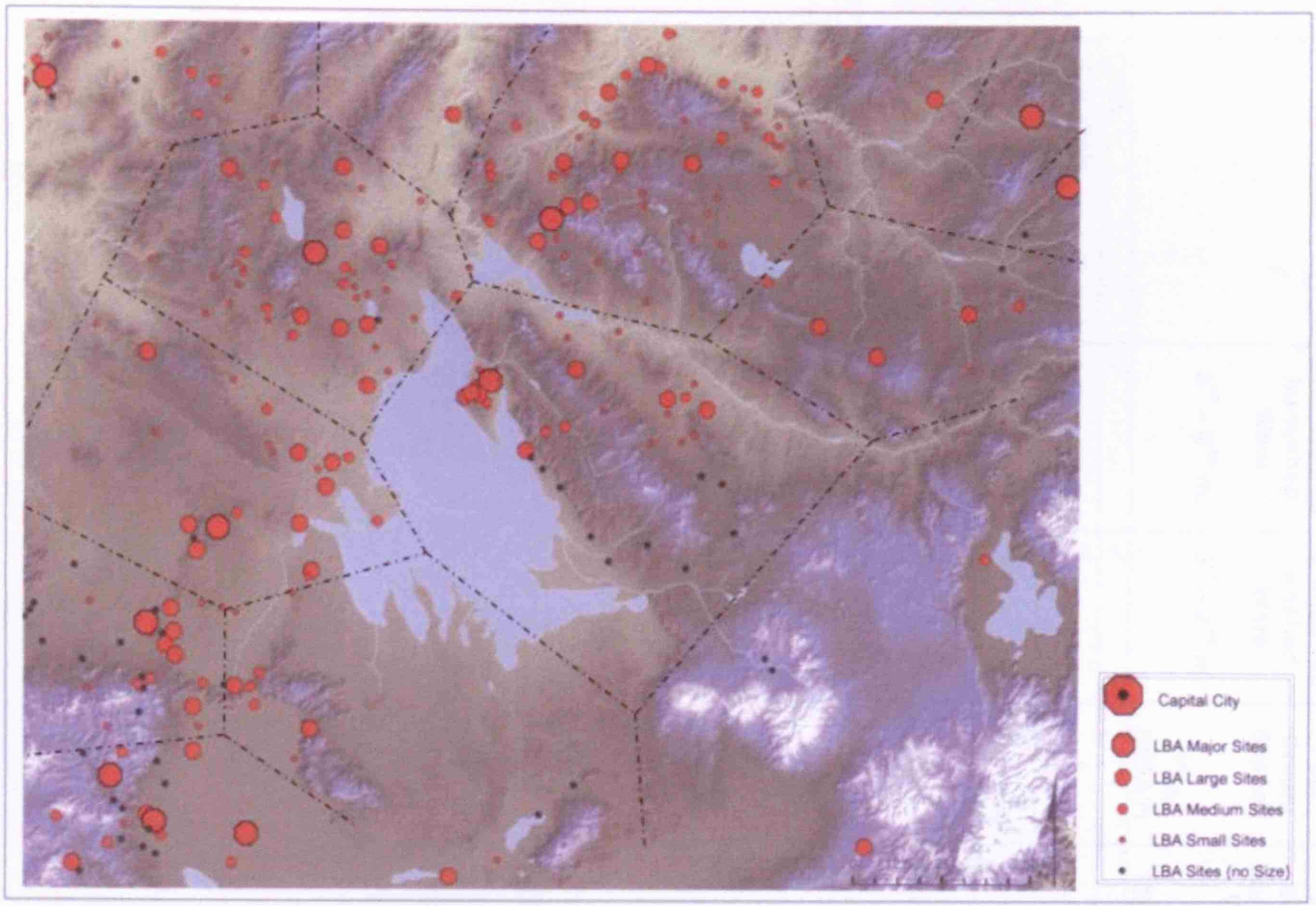


Map 46: Hypothetical territorial divisions in Regions A1, A2 and B1



N.B.: The hypothetical territorial divisions were generated by using the largest sites in the region as centre points.

Map 47: Hypothetical territorial divisions in Regions A1 and A3



N.B.: The hypothetical territorial divisions were generated by using the largest sites in the region as centre points.

Table 33: Sivas and Malatya survey (southern portion)

Nr.	Site	Red-slipped burnished Ware 3rd – 2nd m.	Orange-red washed Ware 3rd – 2nd m.	Fine Cream Slipped 2nd m. (MBA?)	Plain Simple Burnished Ware MBII-LBI	Coarse Buff Ware 2nd m.
3	Çiftlik	✓	✓			✓
4	Ispendere		✓			
14	Hasırcılar II	✓			✓	
16	Alişar					✓
25	Fethiye (ca. 0.5 ha)		✓		✓	✓
26	Hasartepe				✓	
28	Hasarkaya	✓			✓	
29	Bahçedamı (Kala Tepe) (ca 0.1 ha)					✓
30	Ihsanlı	✓	✓	✓		

Source: Yakar and Gursan-Salzmann (1979)

Figure 39: Central Anatolia Survey MBA-LBA site-size distribution

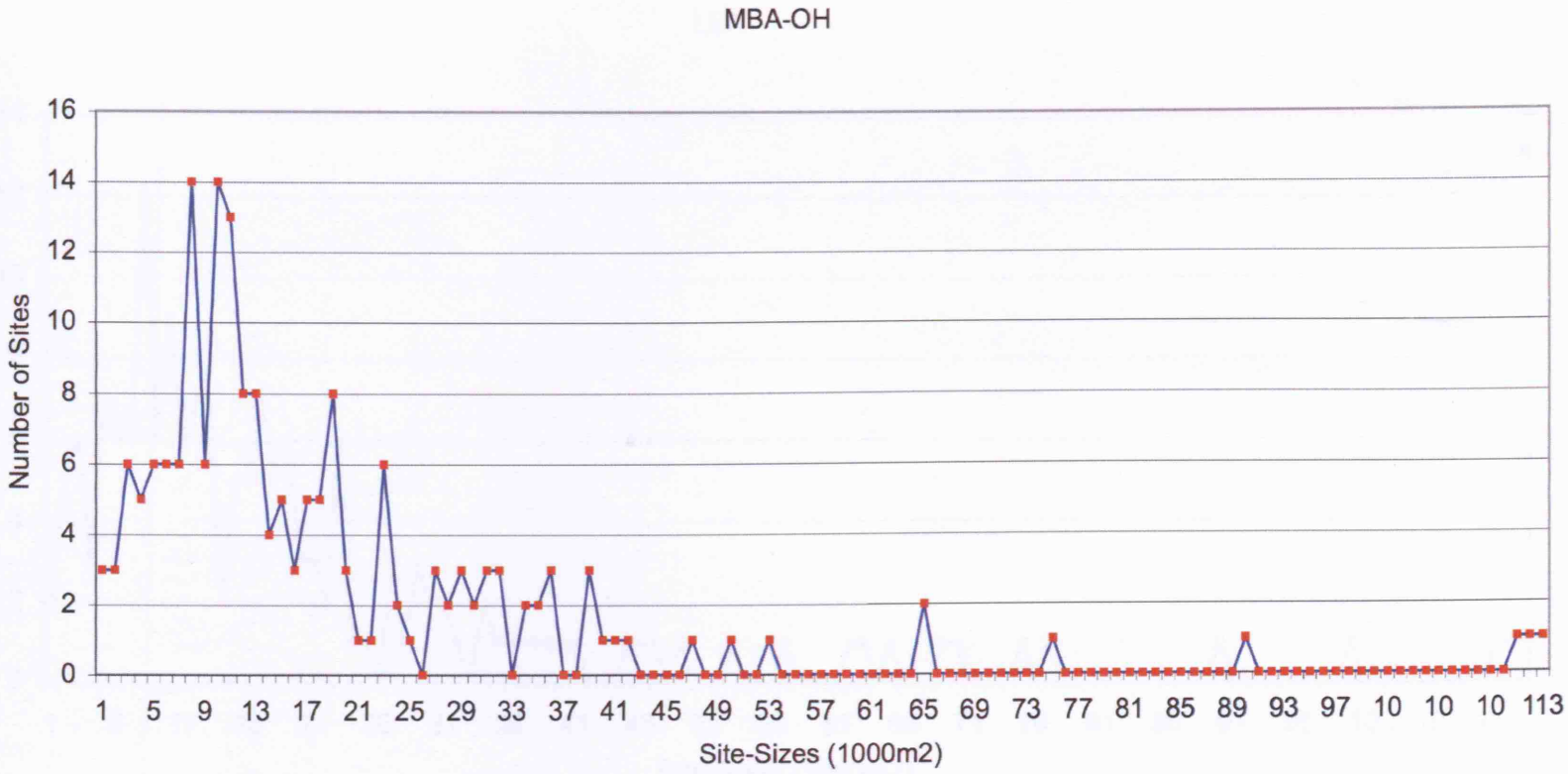


Figure 40: Central Anatolia Survey LBA site-size distribution

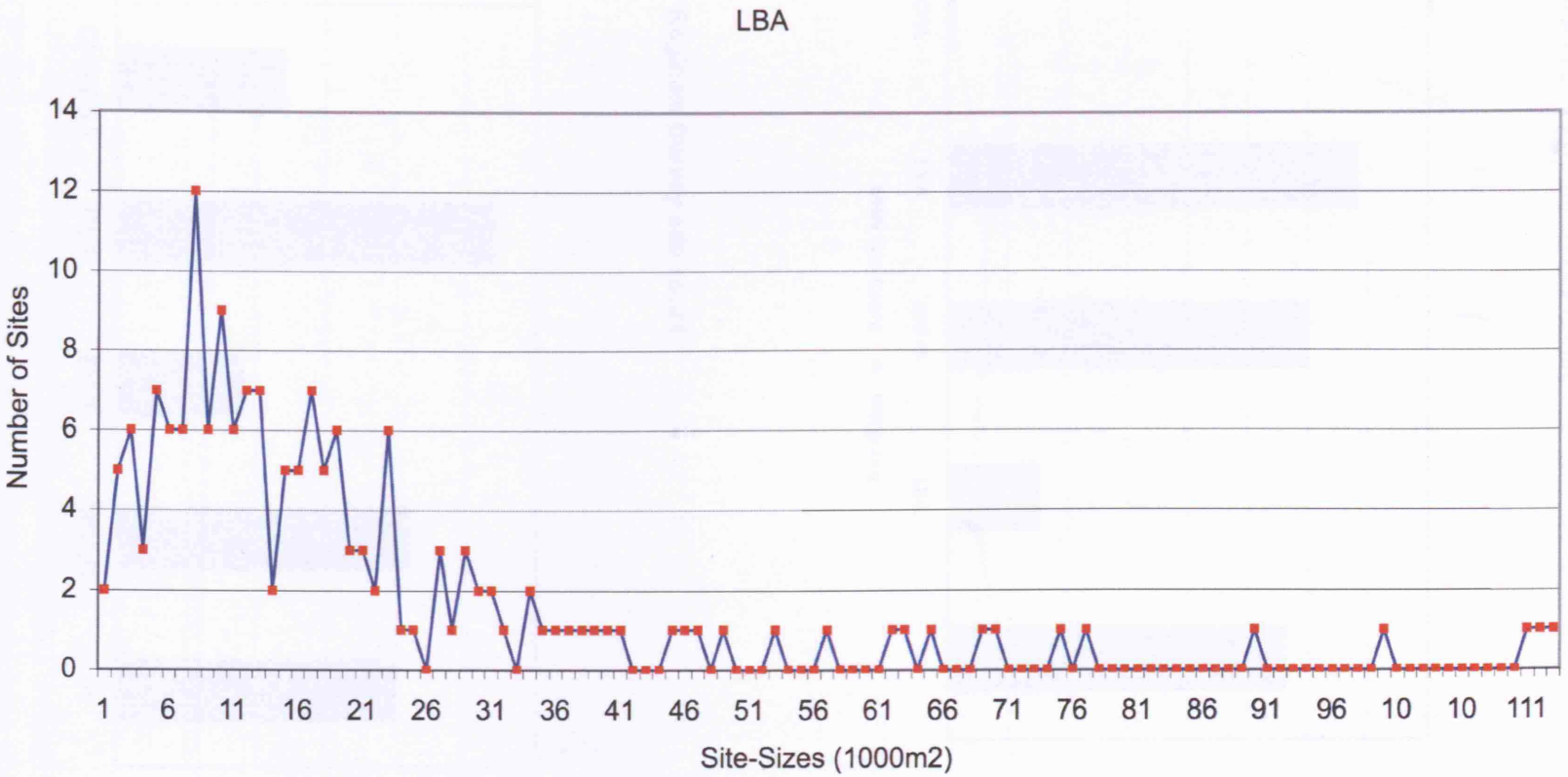


Figure 41: Region A1 (Çorum 1 and 2) site count

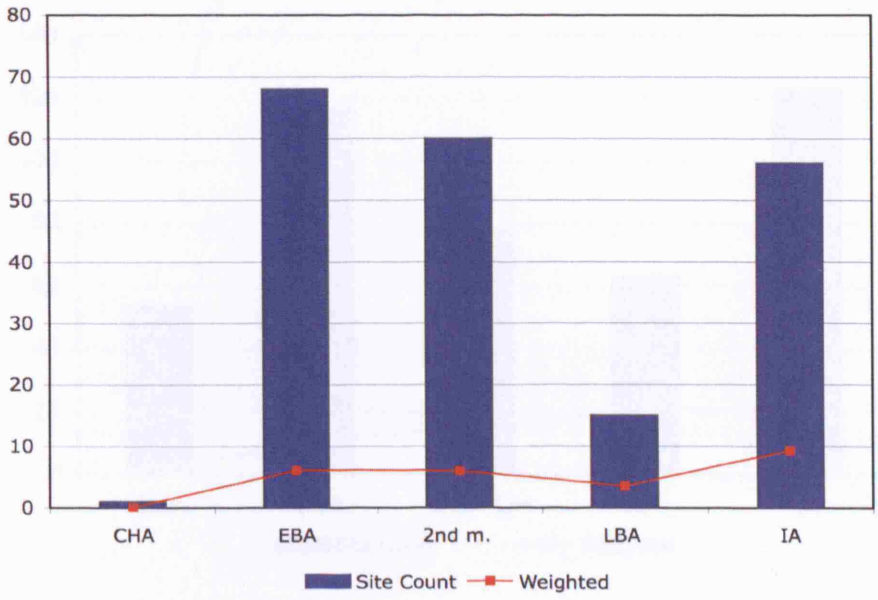


Figure 42: Alişar Regional Survey site count

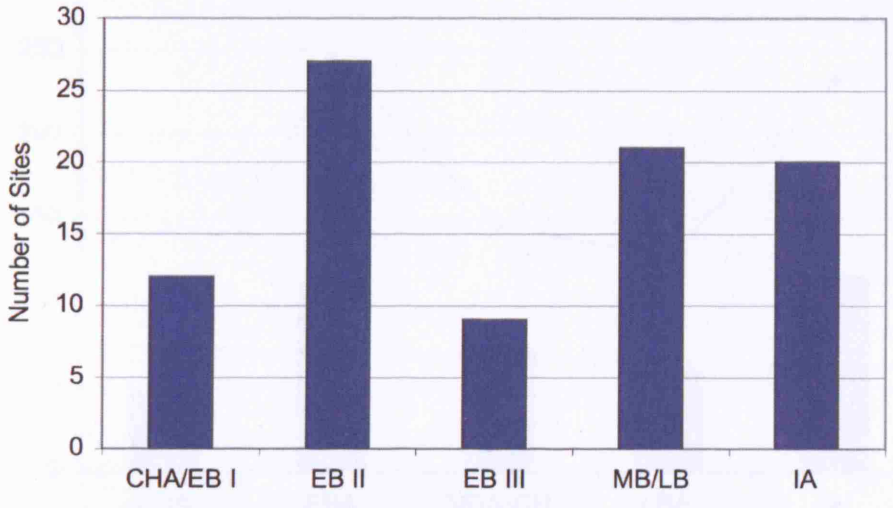


Figure 43: Region A1 (south) site count

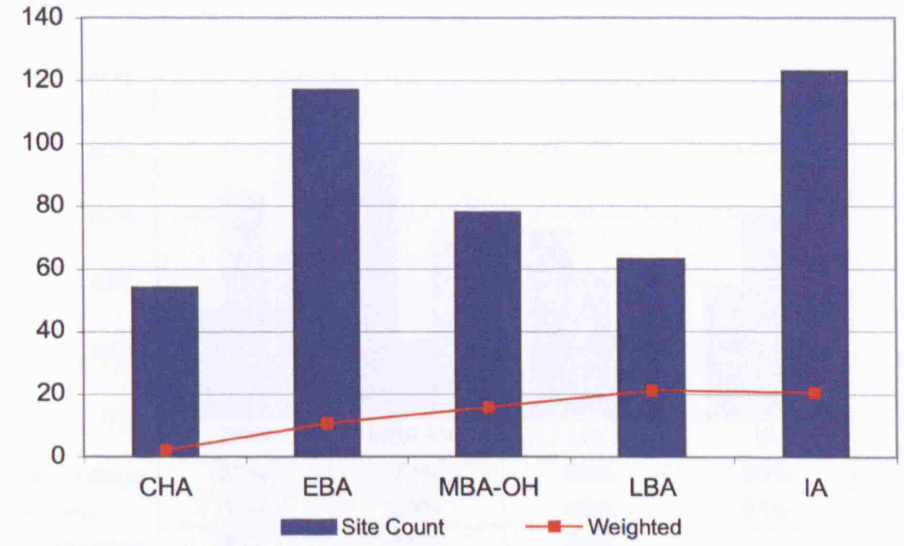


Figure 44: Region A1 (south) aggregate settlement area

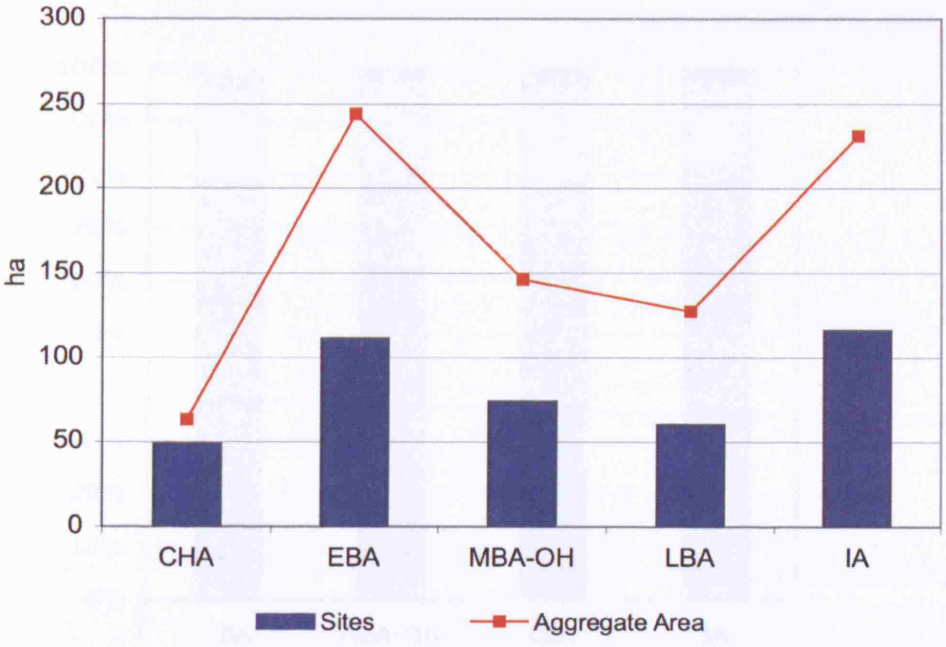
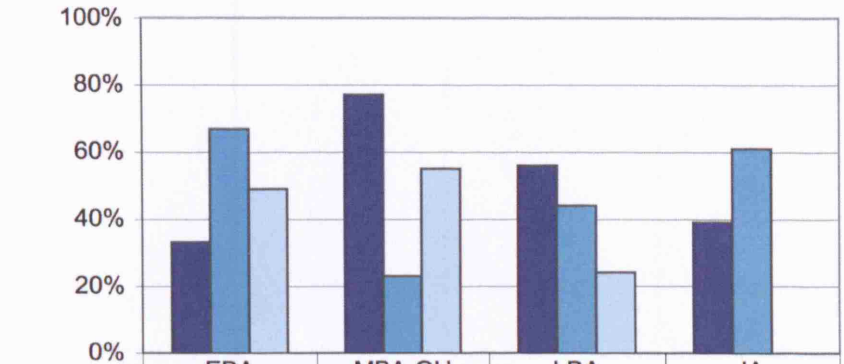


Figure 45: Region A1 (south) settlement continuity



	EBA	MBA-OH	LBA	IA
Continue	33%	77%	56%	39%
New	67%	23%	44%	61%
Abandon	49%	55%	24%	

Figure 46: Region A1 (south) site-size distribution

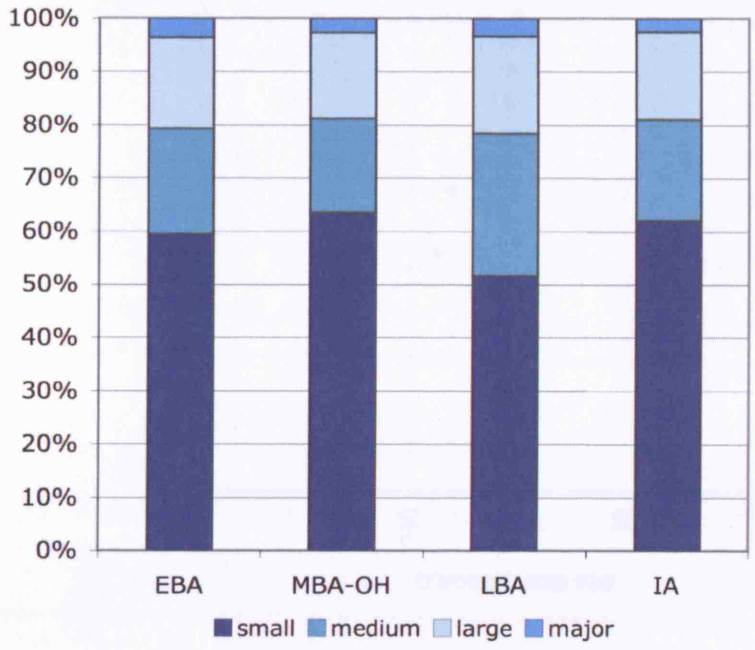


Figure 47: Region A1 (south) MBA-OH rank-size distribution

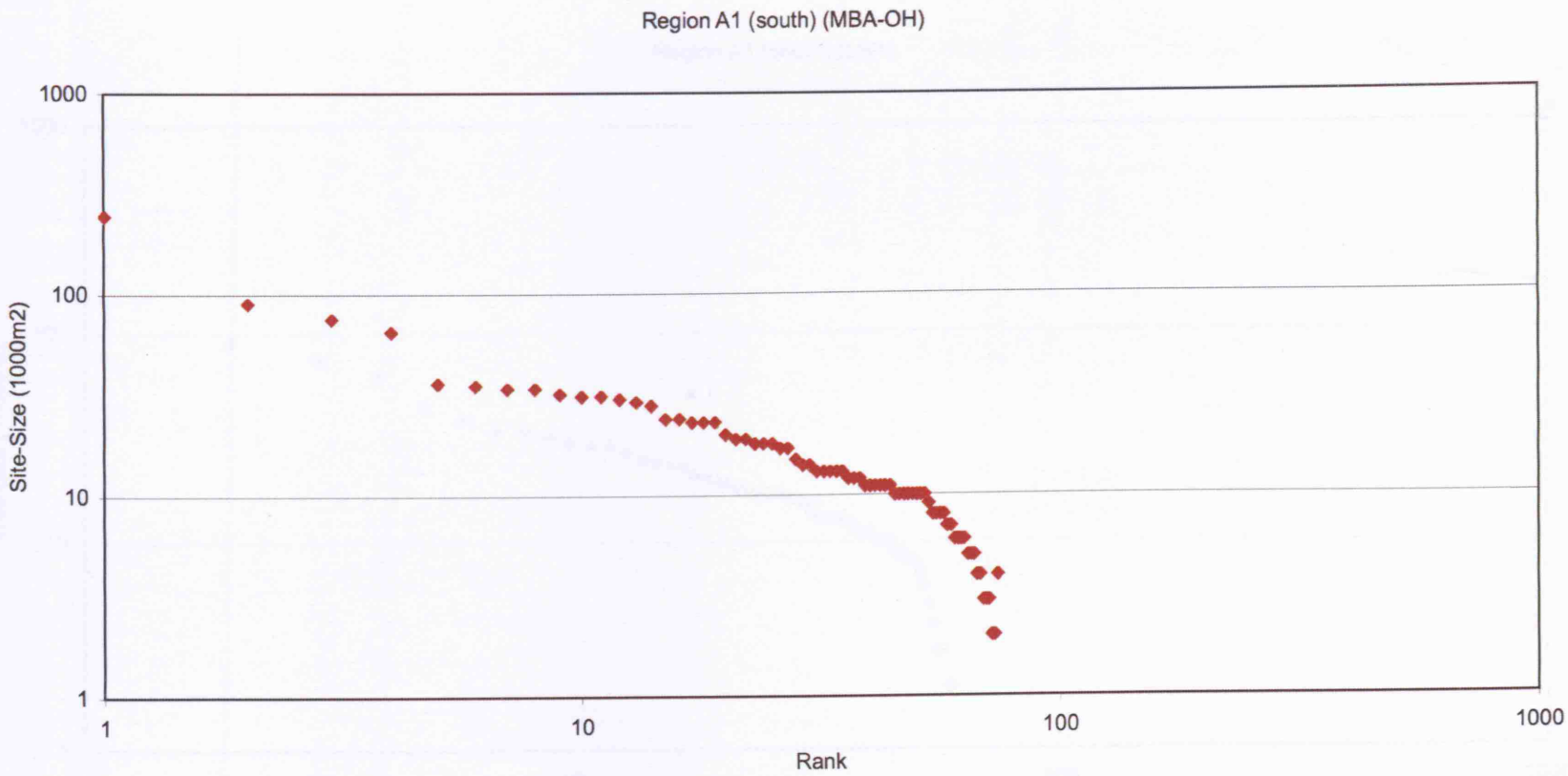


Figure 48: Region A1 (south) LBA rank-size distribution

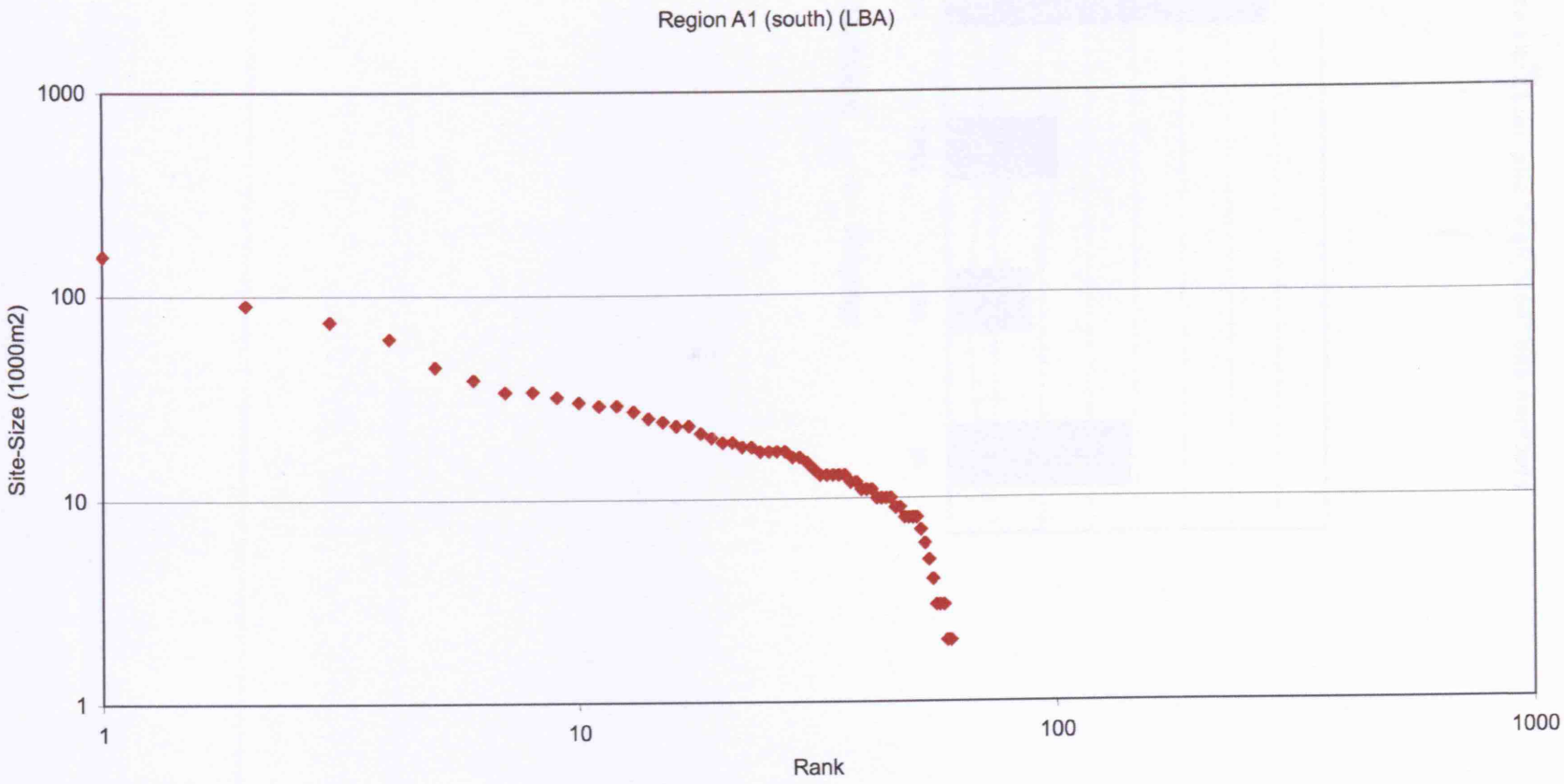


Figure 49: Region A2 absolute site count and "weighted" site numbers

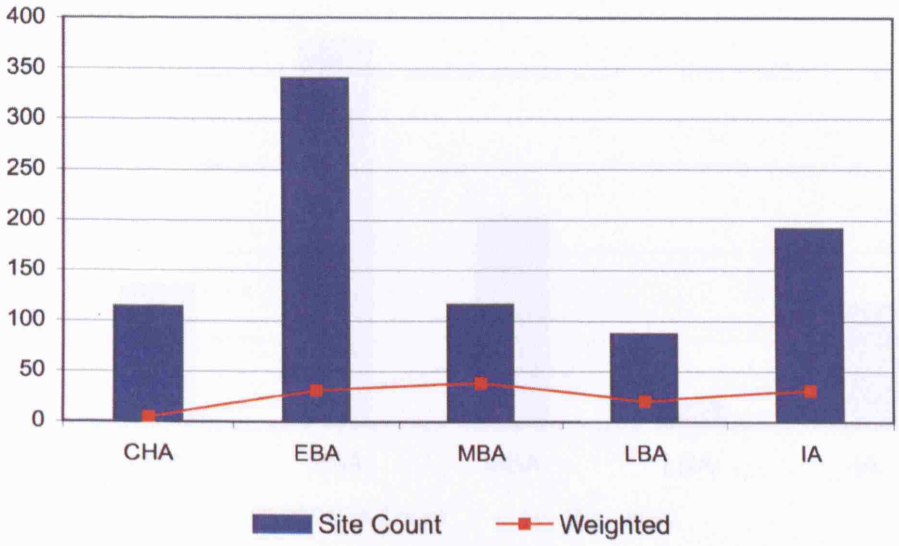


Figure 50: Region A2 (Samsun) site count and "weighted" site numbers

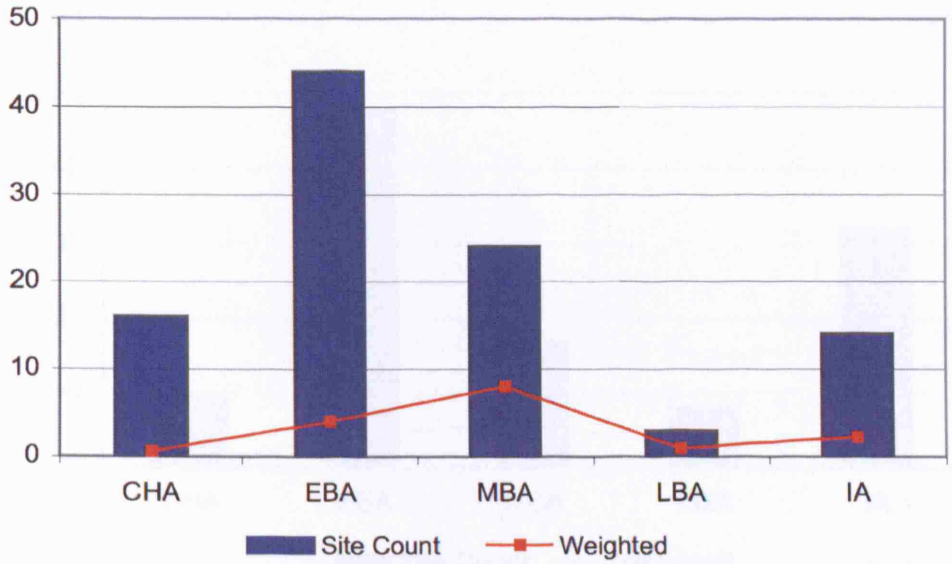


Figure 51: Region A2 (Amasya) site count and "weighted" site numbers

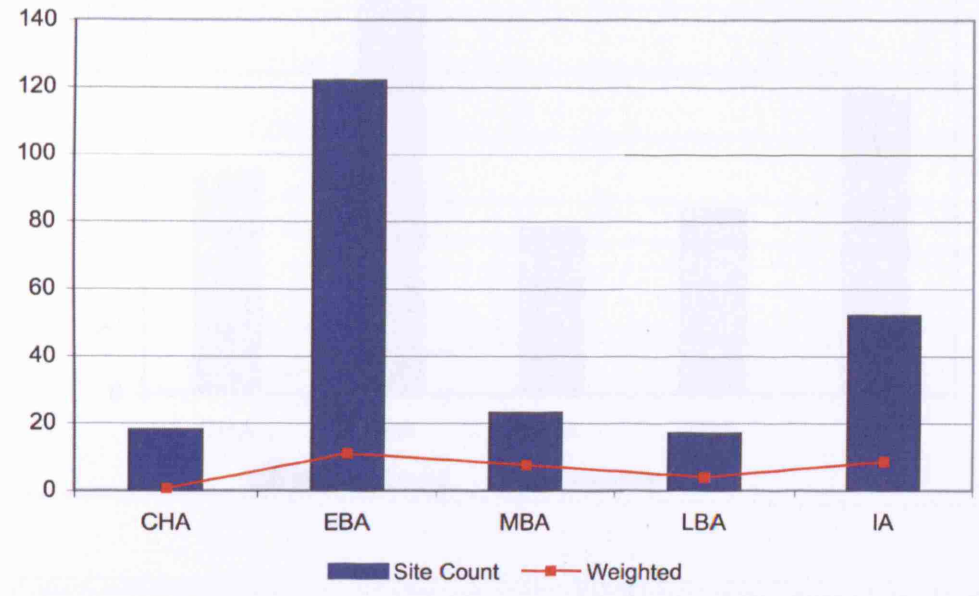


Figure 52: Region A2 (Tokat) site count and "weighted" site numbers

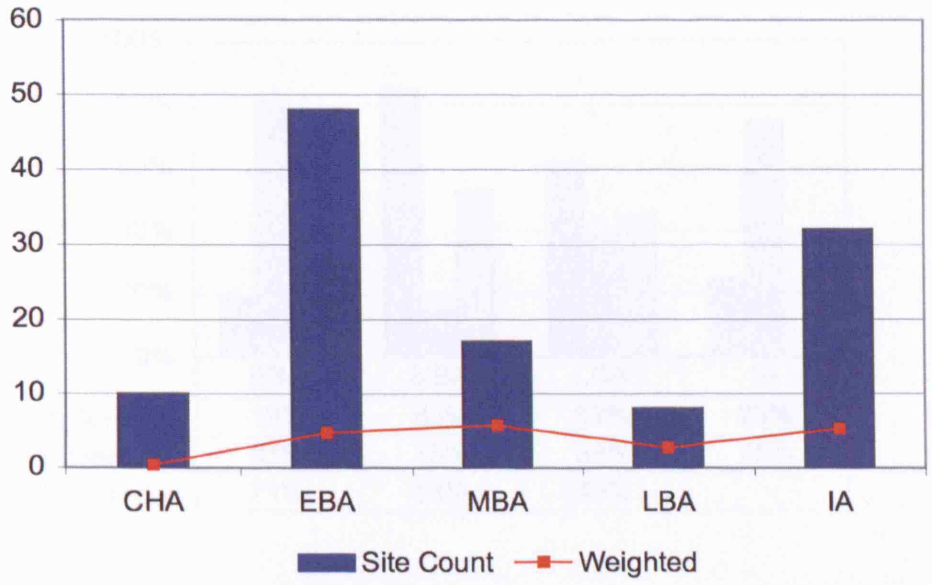
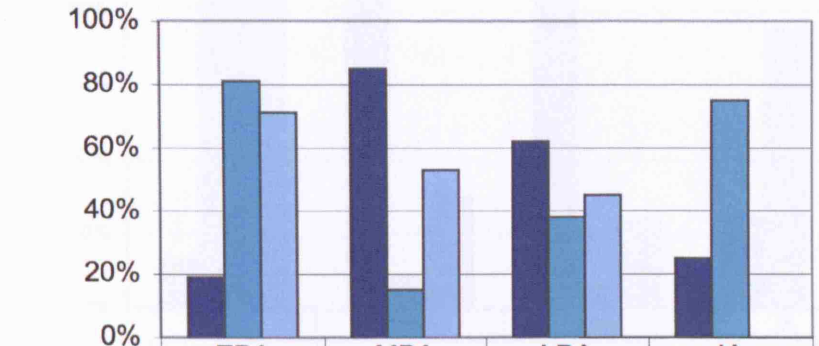


Figure 53: Region A2 (Sivas) site count and "weighted" site numbers

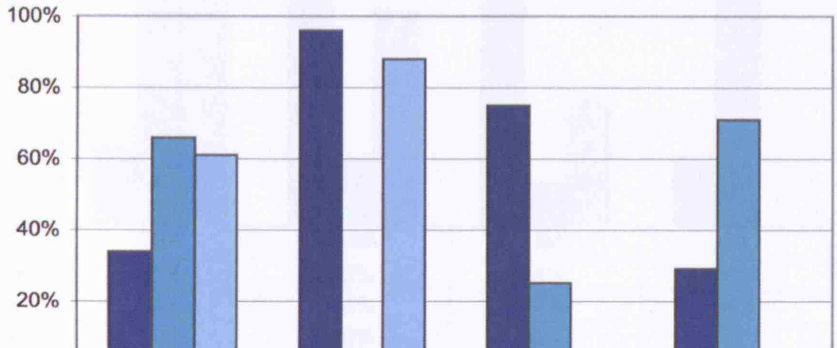
Figure 54: Region A2 settlement continuity



	EBA	MBA	LBA	IA
Continue	19%	85%	62%	25%
New	81%	15%	38%	75%
Abandon	71%	53%	45%	

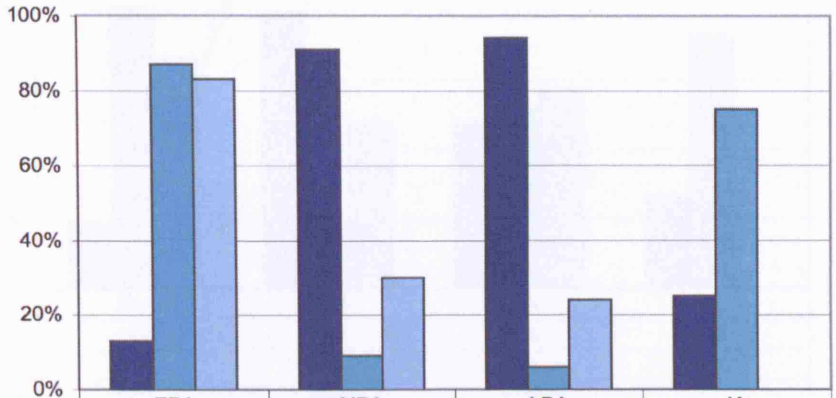
Figure 55: Settlement continuity a) Samsun b) Amasya c) Tokat and d) Sivas provinces

a) Samsun



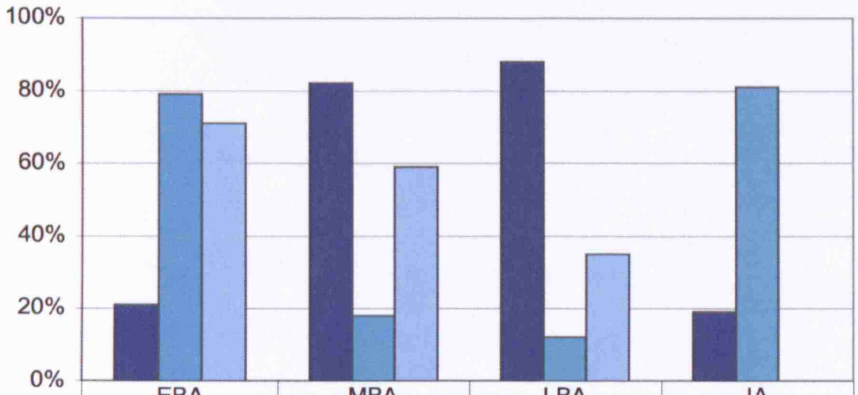
	EBA	MBA	LBA	IA
Continue	34%	96%	75%	29%
New	66%	4%	25%	71%
Abandon	61%	88%	0	

b) Amasya



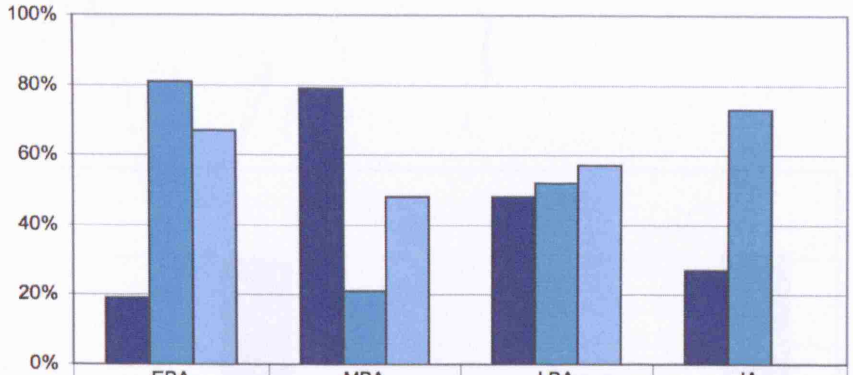
	EBA	MBA	LBA	IA
Continue	13%	91%	94%	25%
New	87%	9%	6%	75%
Abandon	83%	30%	24%	

c) Tokat



	EBA	MBA	LBA	IA
Contine	21%	82%	88%	19%
New	79%	18%	12%	81%
Abandon	71%	59%	35%	

d) Sivas



	EBA	MBA	LBA	IA
Continue	19%	79%	48%	27%
New	81%	21%	52%	73%
Abandon	67%	48%	57%	

Figure 56: Central Anatolia (Region A3) site count

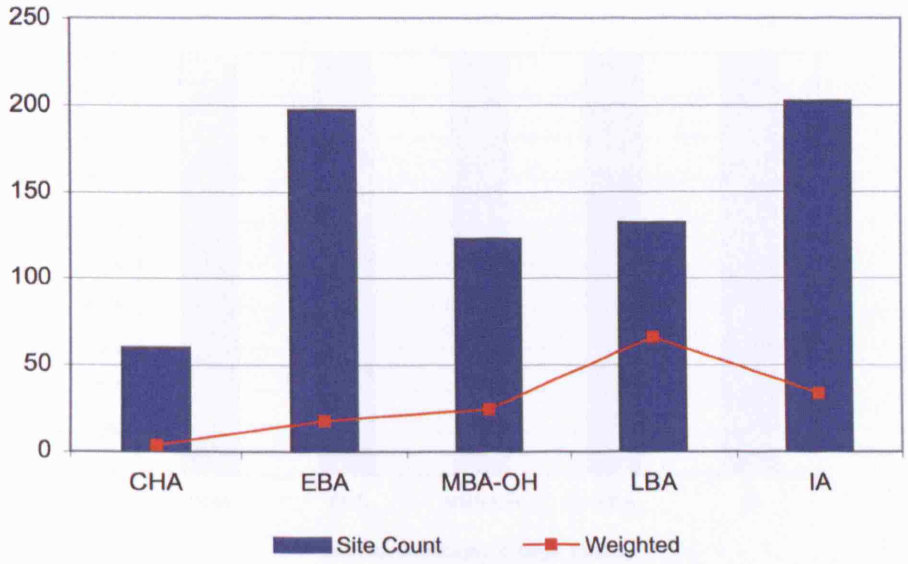


Figure 57: Central Anatolia (Region A3) aggregate site area

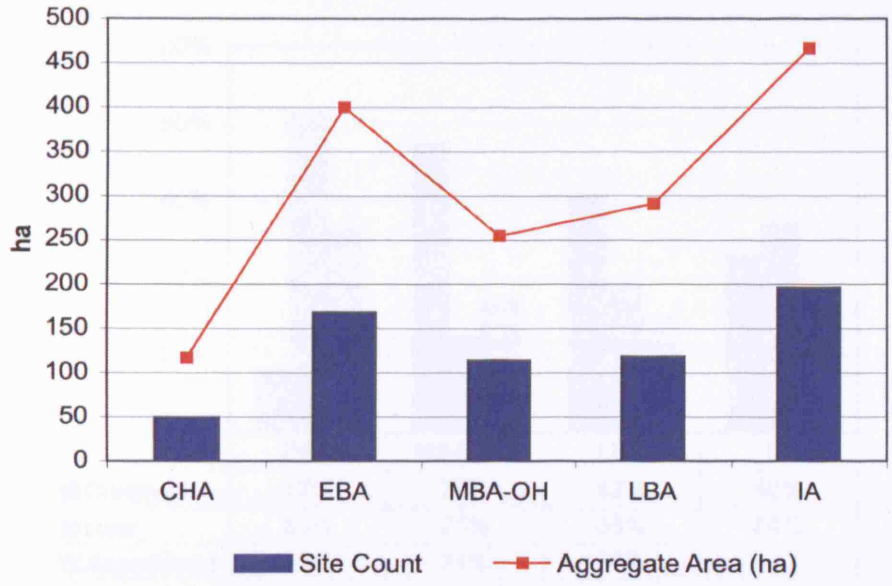


Figure 58: Region A3 (north) site-size distribution

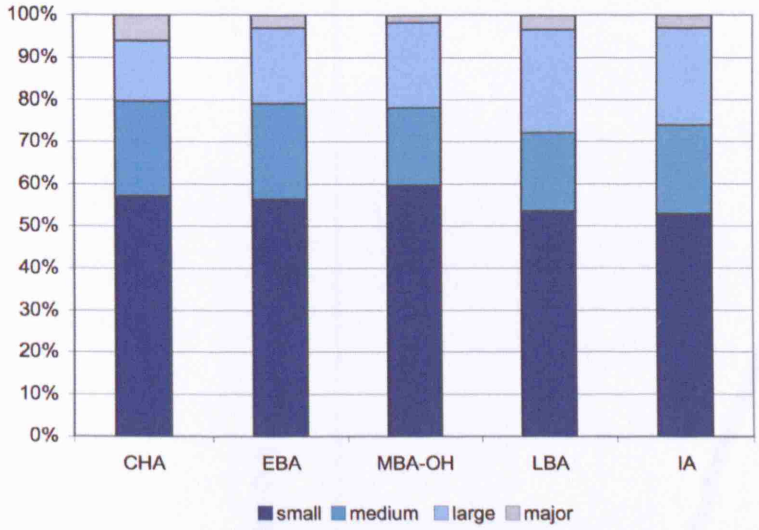
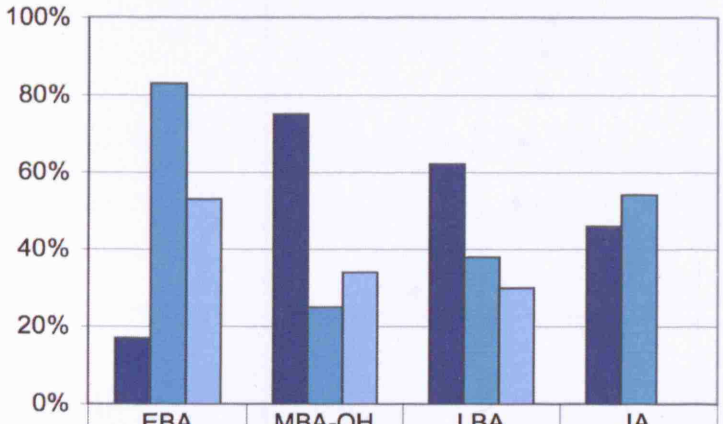


Figure 59: Region A3 (north) settlement continuity



	EBA	MBA-OH	LBA	IA
Continue	17%	75%	62%	46%
New	83%	25%	38%	54%
Abandoned	53%	34%	30%	

Figure 60: Region A3 (north) MBA-OH rank-size distribution

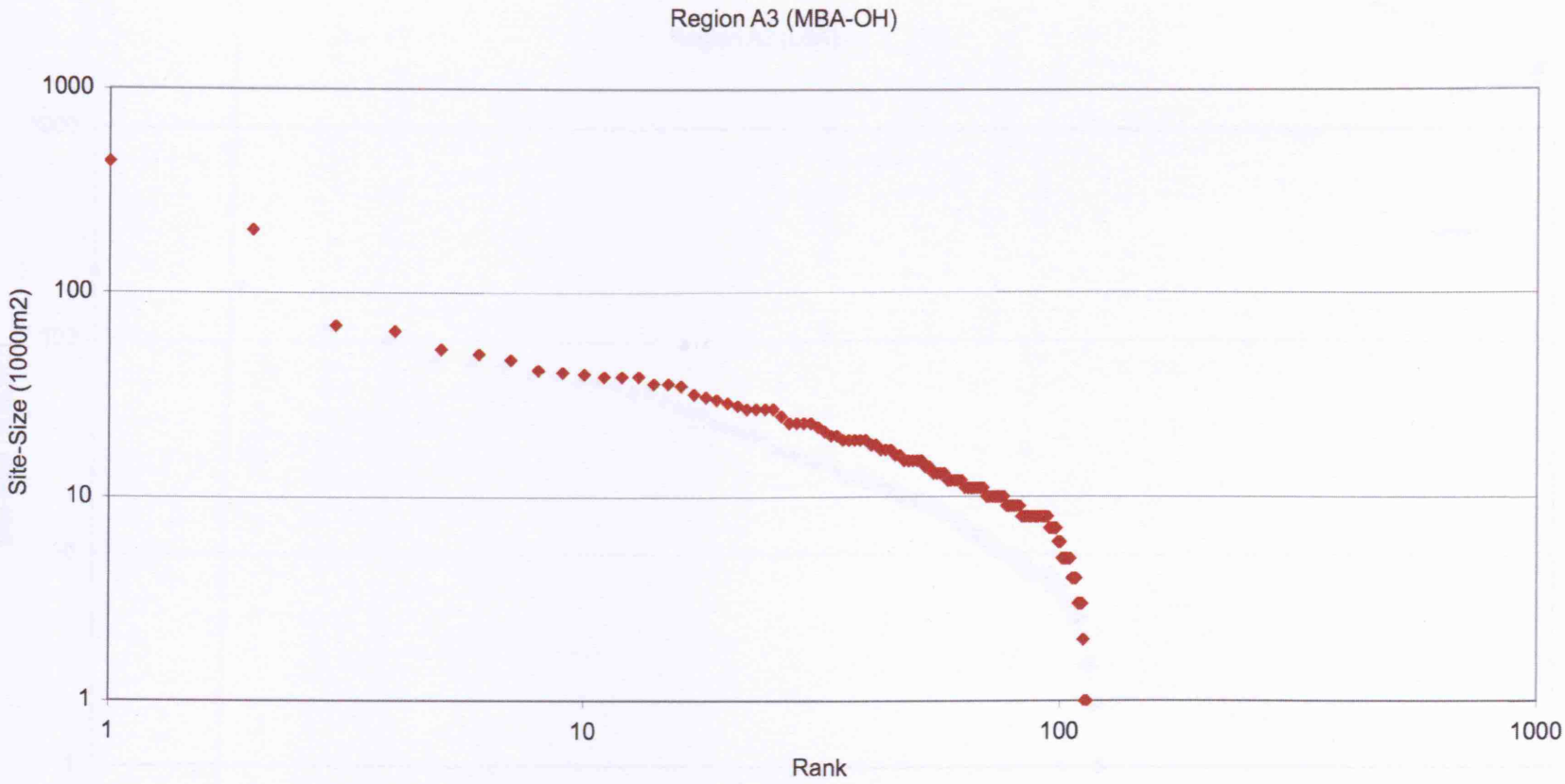


Figure 61: Region A3 (north) LBA rank-size distribution

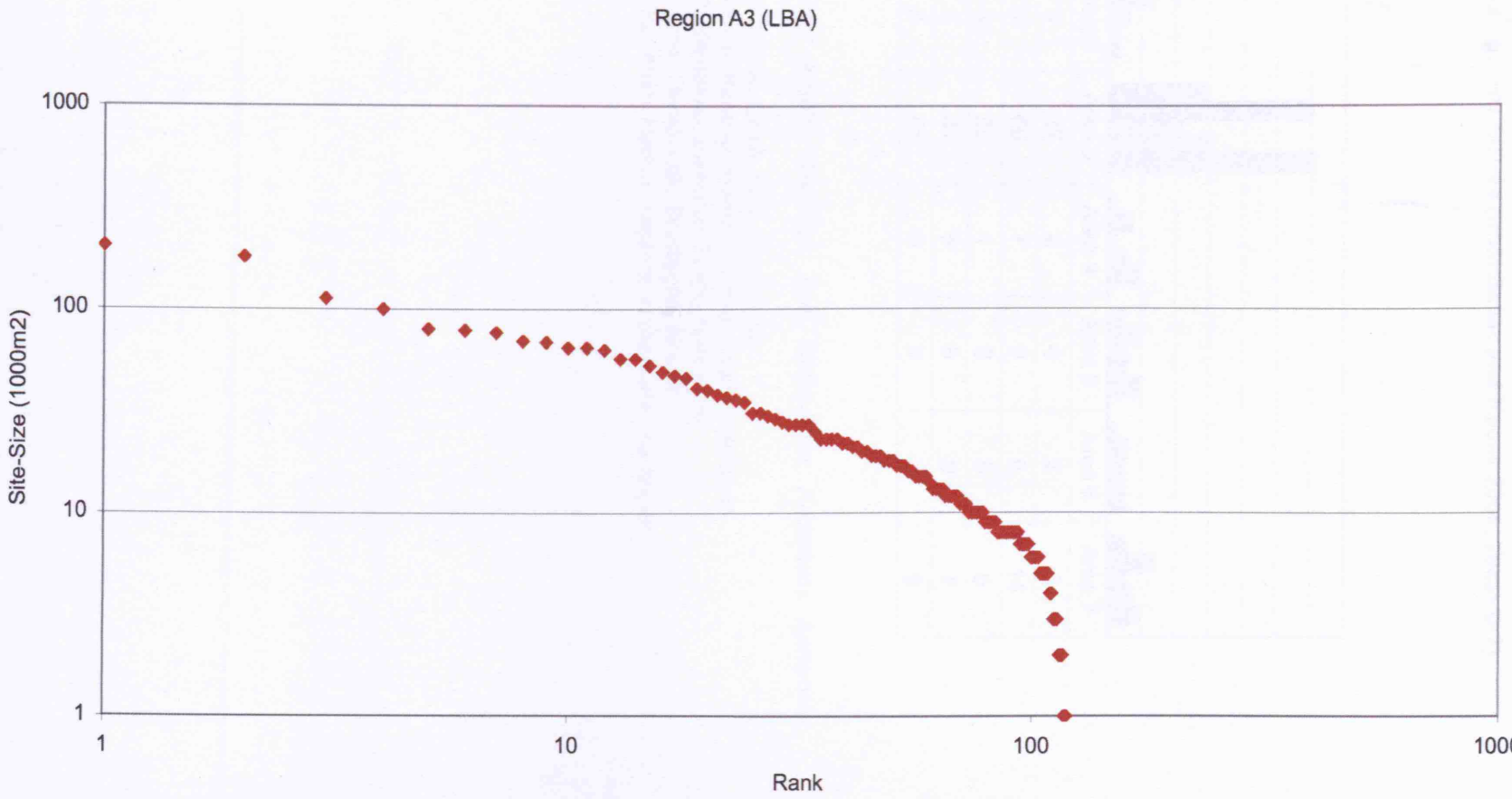
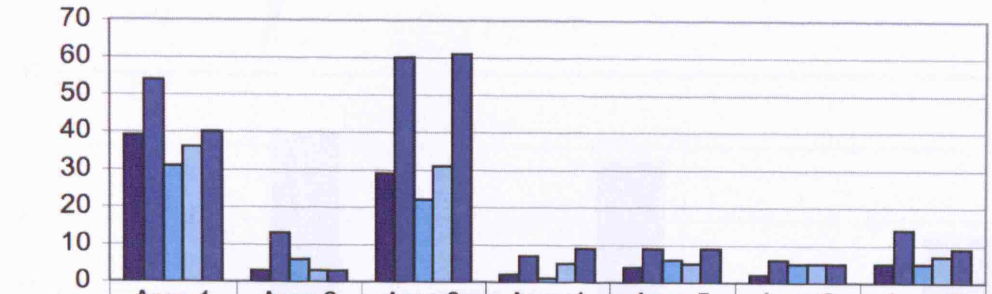


Figure 62: Region A3 Bahar survey results (from Bahar and Koçak 2004, Tablo D:7)



	Area 1	Area 2	Area 3	Area 4	Aera 5	Area 6	Area 7
CHA	39	3	29	2	4	2	5
EBA	54	13	60	7	9	6	14
MBA	31	6	22	1	6	5	5
LBA	36	3	31	5	5	5	7
IA	40	3	61	9	9	5	9

Area 1: Konya (north-west): Akşehir, Tuzlukçu, Ilgın, Doğanhısar, Kadınhanı, Sarayönü, Altınekin
Area 2: Konya (north-west): Yunak, Çeltik, Kulu, Cihanbeyli
Area 3: Konya (south): Selçuklu, Karatay, Meram, Çumra, Akören, Derbent
Area 4: Konya (south-east): Karapınar, Emirgazi, Ereğli, Halkapınar
Area 5: Konya (south): Beyşehir, Derebucak, Seydişehir, Höyük
Area 6: Konya (south): Bozkır, Ahırlı, Hadım, Taşkent, Güneysınır, Yalıhöyük
Area 7: Karaman

Figure 63: Region B1 (Project Paphlagonia) site count and "weighted" site numbers

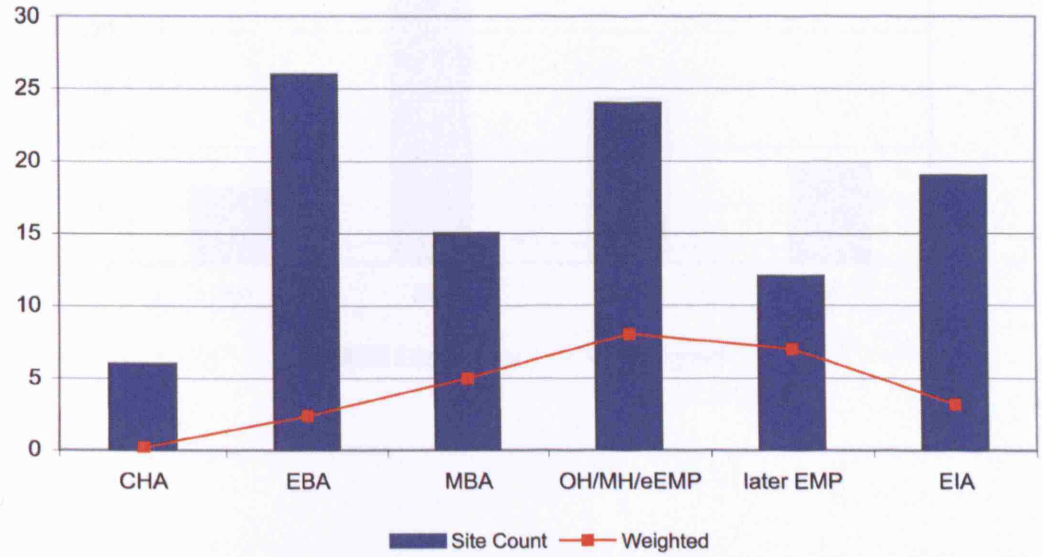


Figure 64: Region C1 (Eskişehir) site count

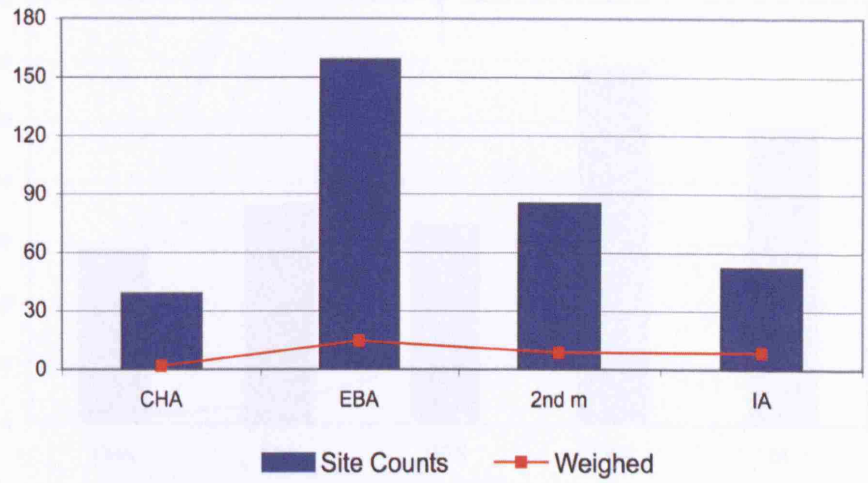
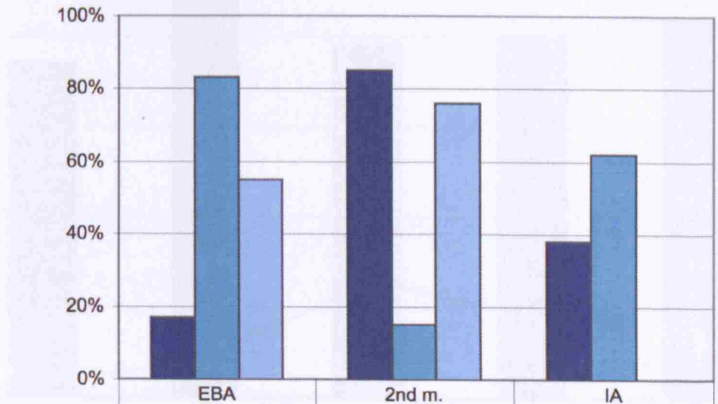


Figure 65: Region C1 (Eskişehir) settlement continuity



	EBA	2nd m.	IA
Continue	17%	85%	38%
New	83%	15%	62%
Abandon	55%	76%	

Figure 66: Region F (Cilicia Survey) site count and "weighted" site numbers

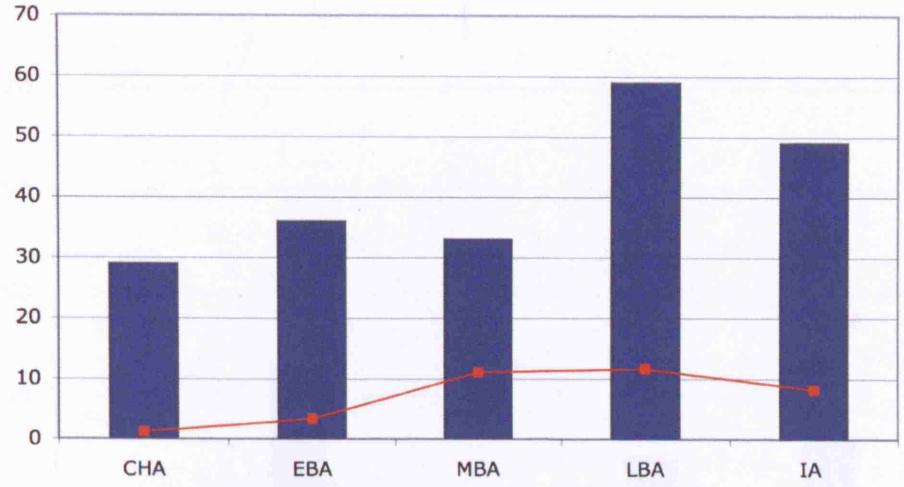


Figure 67: Region F/G (Kilis province) site count and "weighted" site numbers

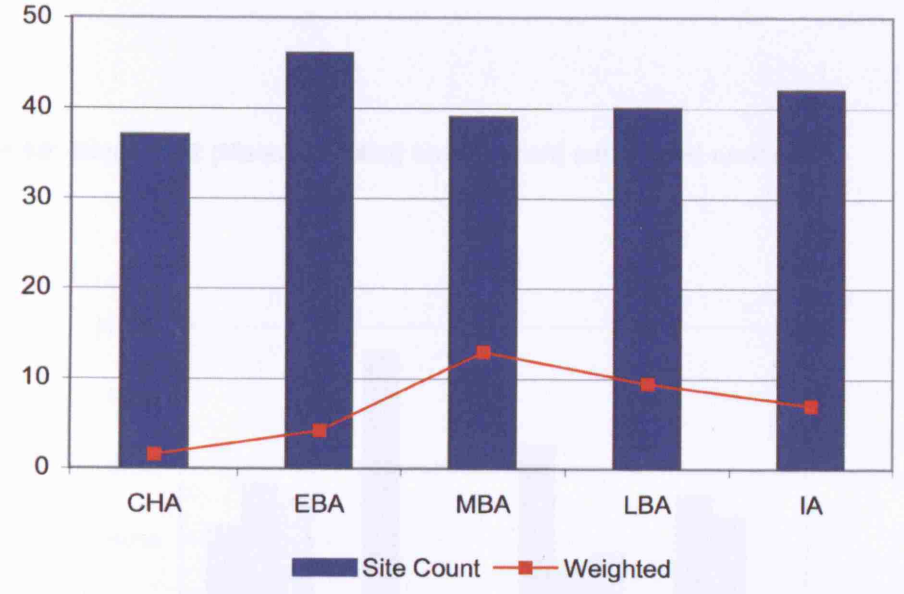


Figure 68: Region G2 site count and aggregate settlement area

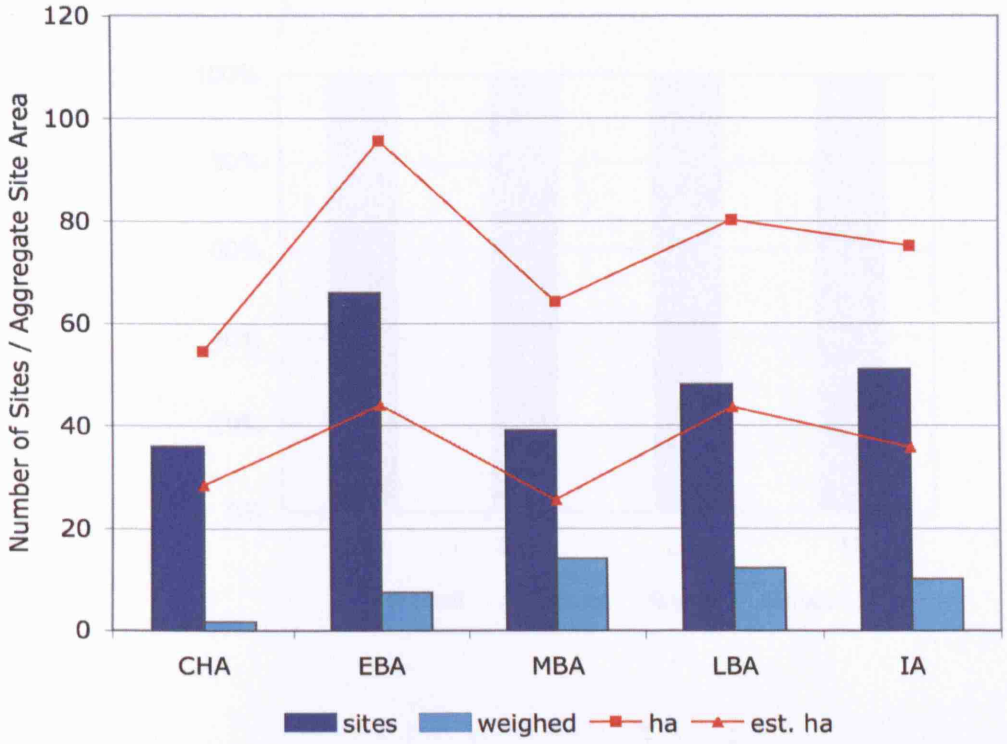
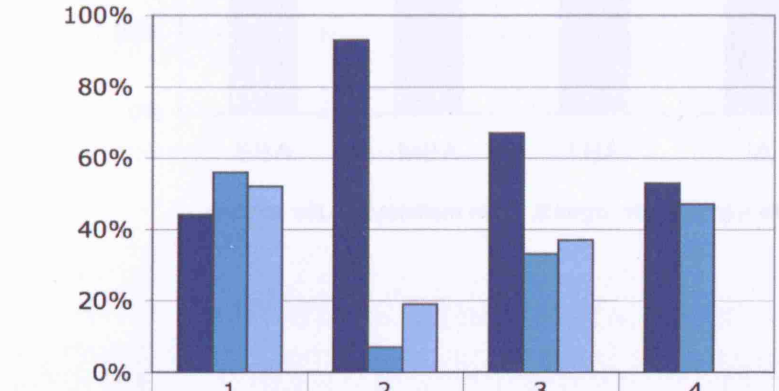


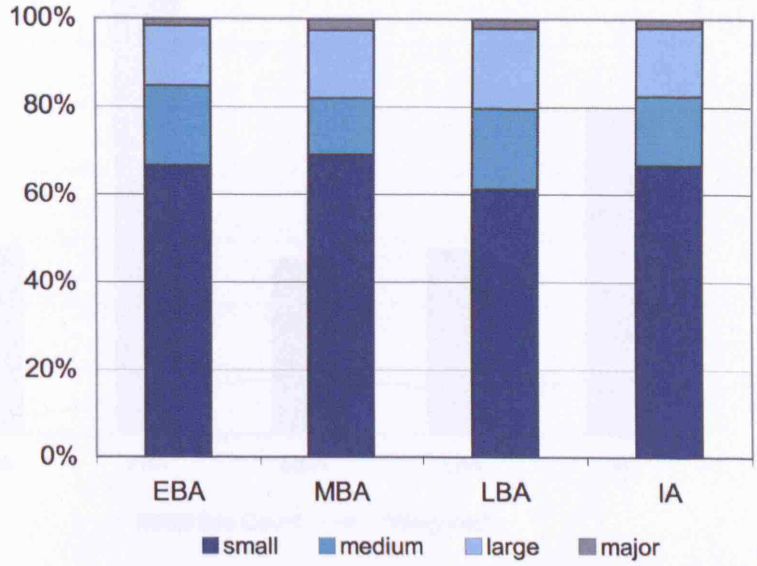
Figure 69: Region G2 (Malatya, Elâzığ and Tunceli) settlement continuity



	1	2	3	4
Continue	44%	93%	67%	53%
New	56%	7%	33%	47%
Abandon	52%	19%	37%	

Figure 70: Region G2 (Malatya, Elâzığ and Tunceli) site-size distribution with a) recorded and b) estimated site sizes

a)



b)

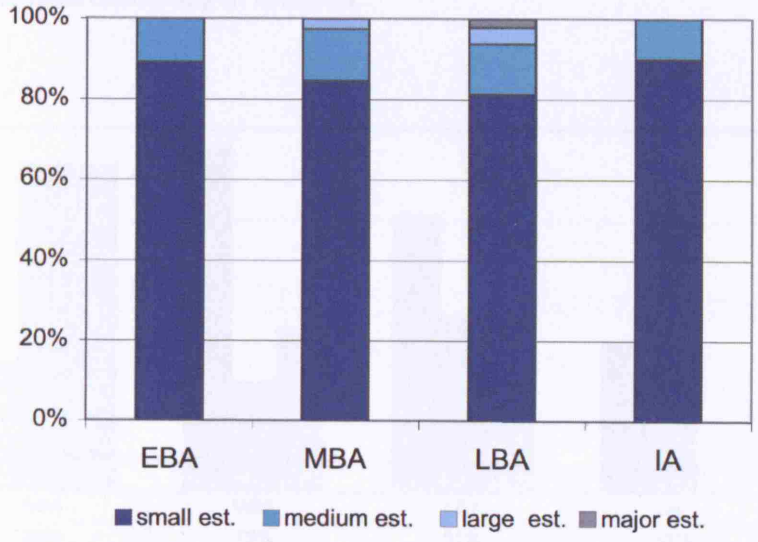


Figure 71: Anatolia summary site count and "weighted" settlement numbers

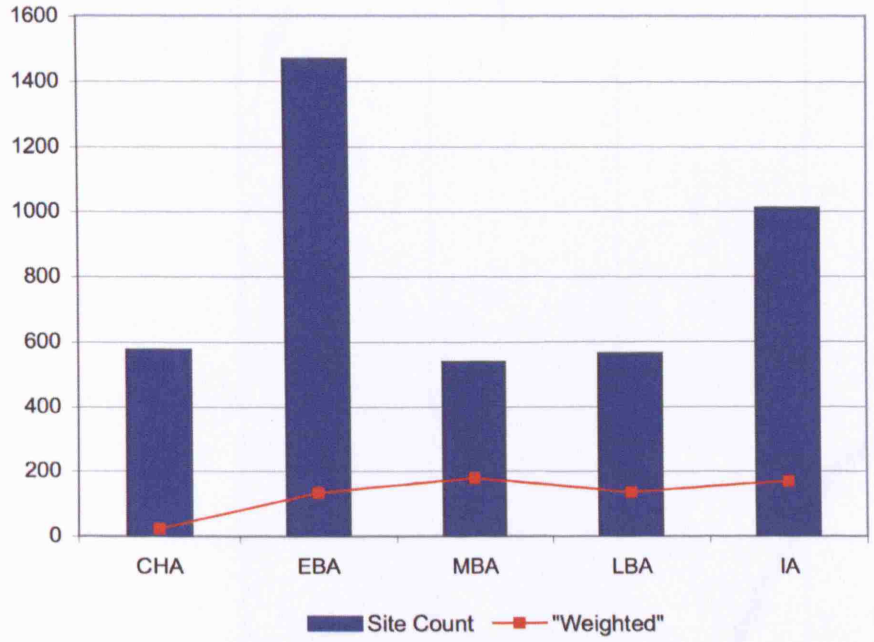
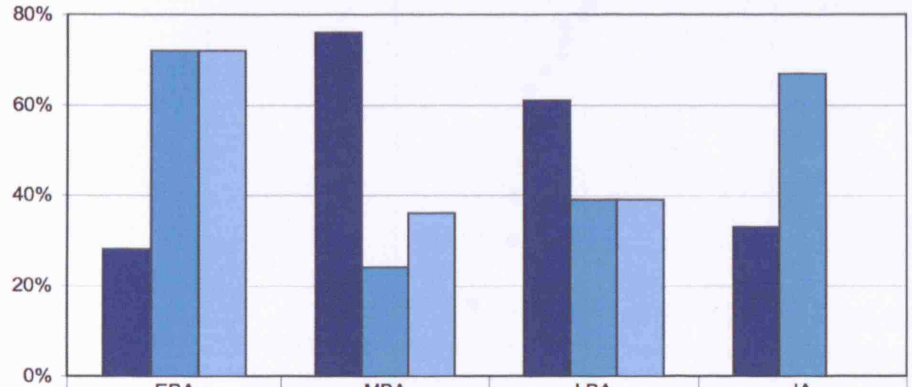


Figure 72: Settlement continuity in Anatolia



	EBA	MBA	LBA	IA
Continue	28%	76%	61%	33%
New	72%	24%	39%	67%
Abandon	72%	36%	39%	

Figure 73: Rank-size distribution of Anatolian MBA sites

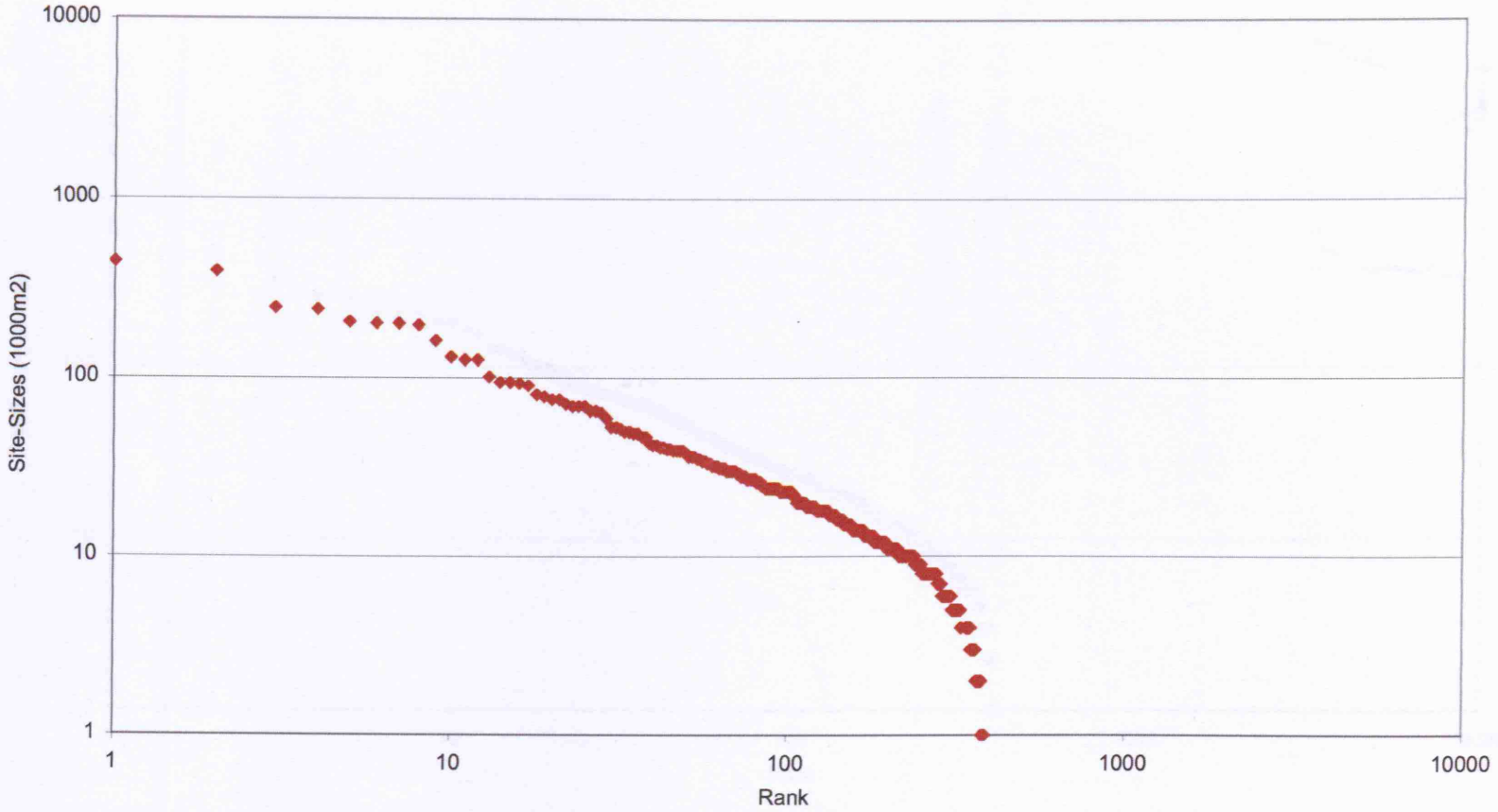


Figure 74: Rank-size distribution of Anatolian LBA sites

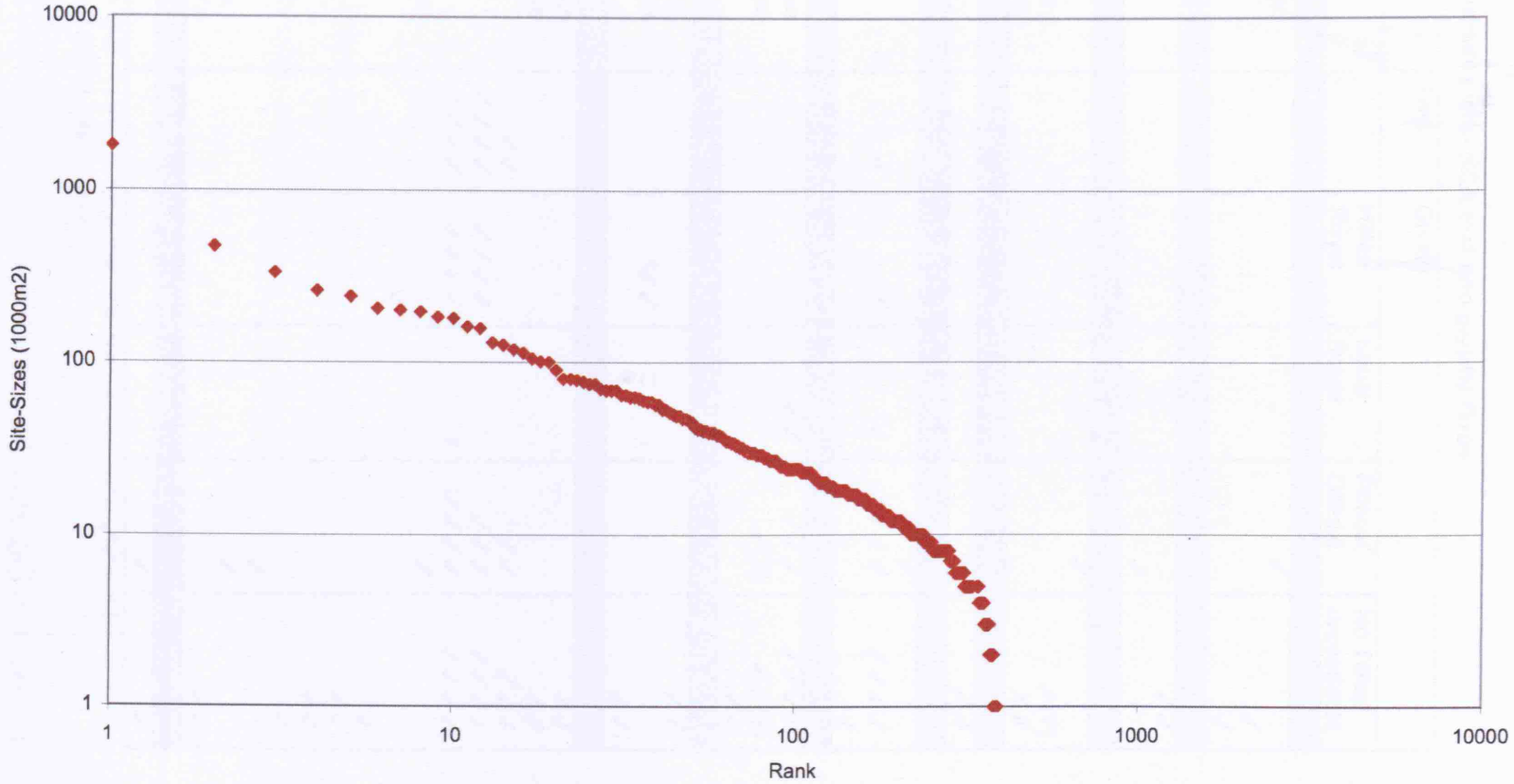


Table 34: Summary of sites with NCA text and glyptic finds

Region	Site	Text	Glyptic:			
			Hittite Royal	Local Royal	Prince/ Official	No Titles/ unreadable
A3						
	Octaraviran				✓	
	Zanapa					✓
	Porsuk					✓
C1						
	Gordion					✓✓
	Dorylaion				✓	
D						
	Troy				✓	
	Metropolis					✓(?)
	Beycesultan					✗✗
E						
	Kilistepe				✓	✓✓
F						
	Soli H.				✓	
	Tarsus	✓	✓	✓	✓✓✓✓	✓✓✓✓
	Mersin					✓
G2						
	Kurucutepe			✓✓	✓✓✓	✓✓✓✓
	Norsuntepe				✓(?)	✓✓(?)
	Tepecik					✓✓
H						
	Tille Höyük					✓✓
	Lidar Höyük		*✓✓			
	Tilbeşar					✓✓
J						
	Carchemish					✓✓
	Deve Höyük					✓✓
	Alalakh	✓✓			✓✓	✓✓✓
	Ugarit	✓✓✓✓	✓✓✓✓		✓✓✓	✓✓✓✓
	Emar	✓✓✓✓	✓✓✓✓	?	✓✓✓✓	✓✓✓✓
	Tell Faq'us				✓	
	Tell Fray		✓			
	Terqa					✓
	Ebla					✓✓
	Hama					✓✓
	Tell Kazel					✓
	Megiddo				✓	
	Tell Aphek				✓	
	Tell el-Far'a					✓✓
K						
	Cyprus				✓	✓

✓ = 1 ✓✓ = 2-5 ✓✓✓ = 6-10 ✓✓✓✓= > 10

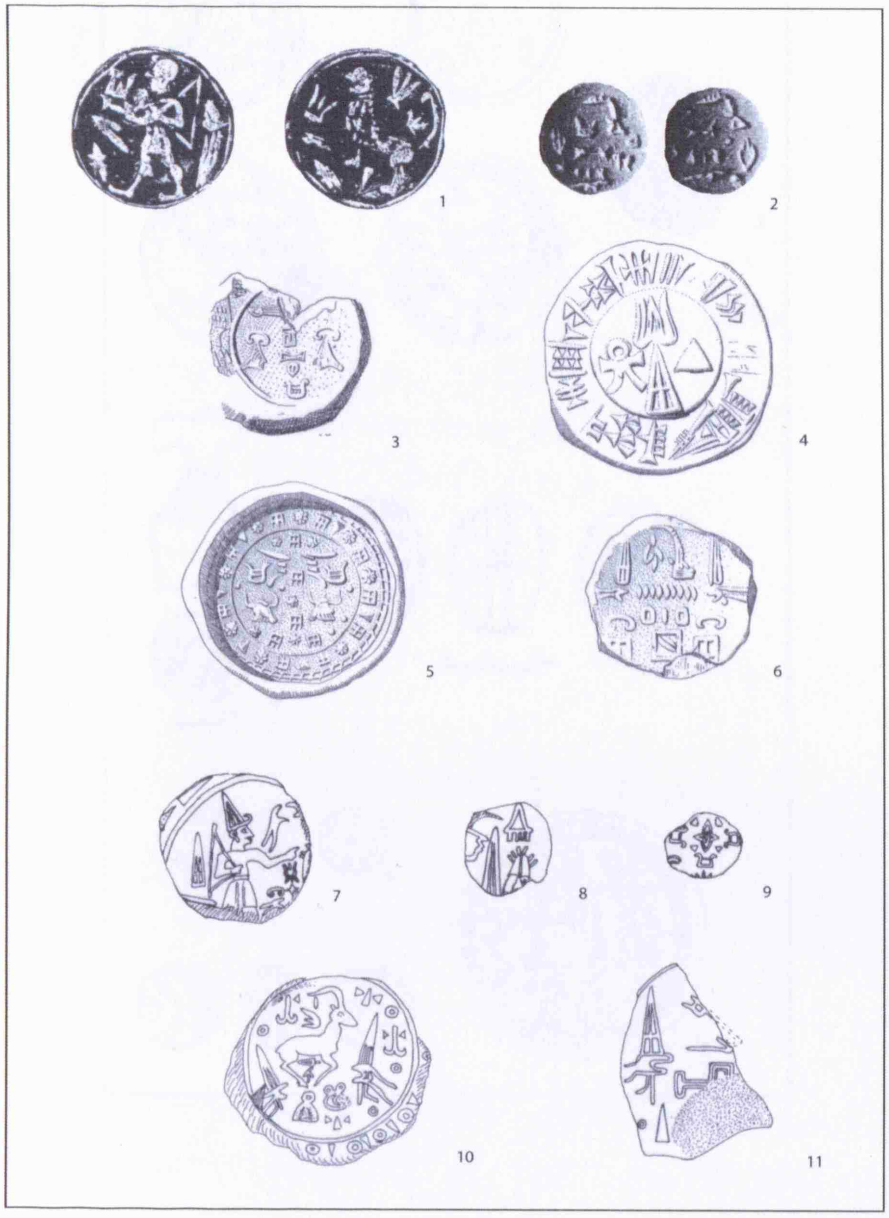
** Carchemish branch of Hittite ruling family*

Figure 75: NCA glyptic from Regions C and D

N.B.: Images not to scale.

1 Gordion (Dusinberre 2005, Figure 134)
2 Gordion (Dusinberre 2005, Figure 129)
3 Gordion (Dusinberre 2005, Figure 138)
4 Gordion (Dusinberre 2005, Figure 135)
5 Şarhöyük-Dorylaion (Darga and Starke 2003, Abb.
6 Troy (Neumann 2001, 47 Nr. 45)
7 Metropolis (Schachner and Meriç 2000, 98 Abb. 6)

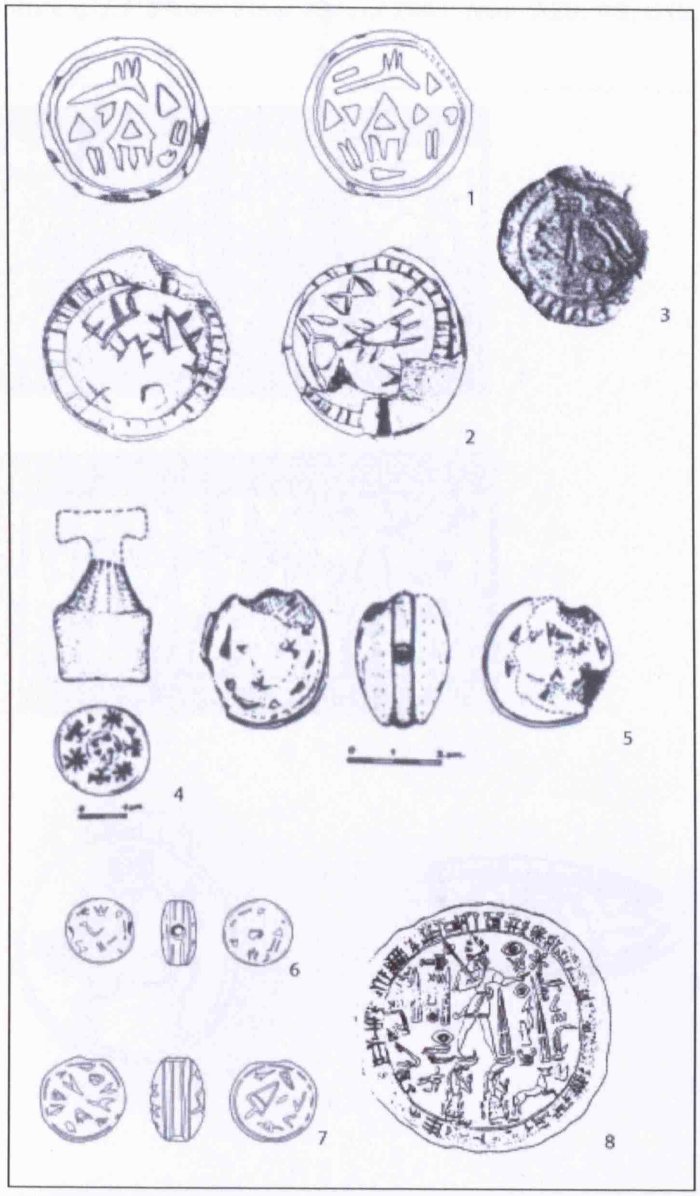
Figure 76: NCA glyptic from Regions E, F and G2



N.B.: Images not to scale.

1 Kilise Tepe (Symington 2001, Fig. 14d)
2 Kilise Tepe (Symington 2001, Fig. 14a)
3 Tarsus (Gelb 1956, Nr. 15)
4 Tarsus (Gelb 1956, Nr. 1)
5 Tarsus (Gelb 1956, Nr. 48)
6 Tarsus (Gelb 1956, Nr. 40)
7 Korucutepe (Güterbock 1973, Nr. 2b)
8 Korucutepe (Güterbock 1973, Nr. 3)
9 Korucutepe (Güterbock 1973, Nr. 6)
10 Korucutepe (Güterbock 1973, Nr. 4)
11 Korucutepe (Güterbock 1973, Nr. 5)

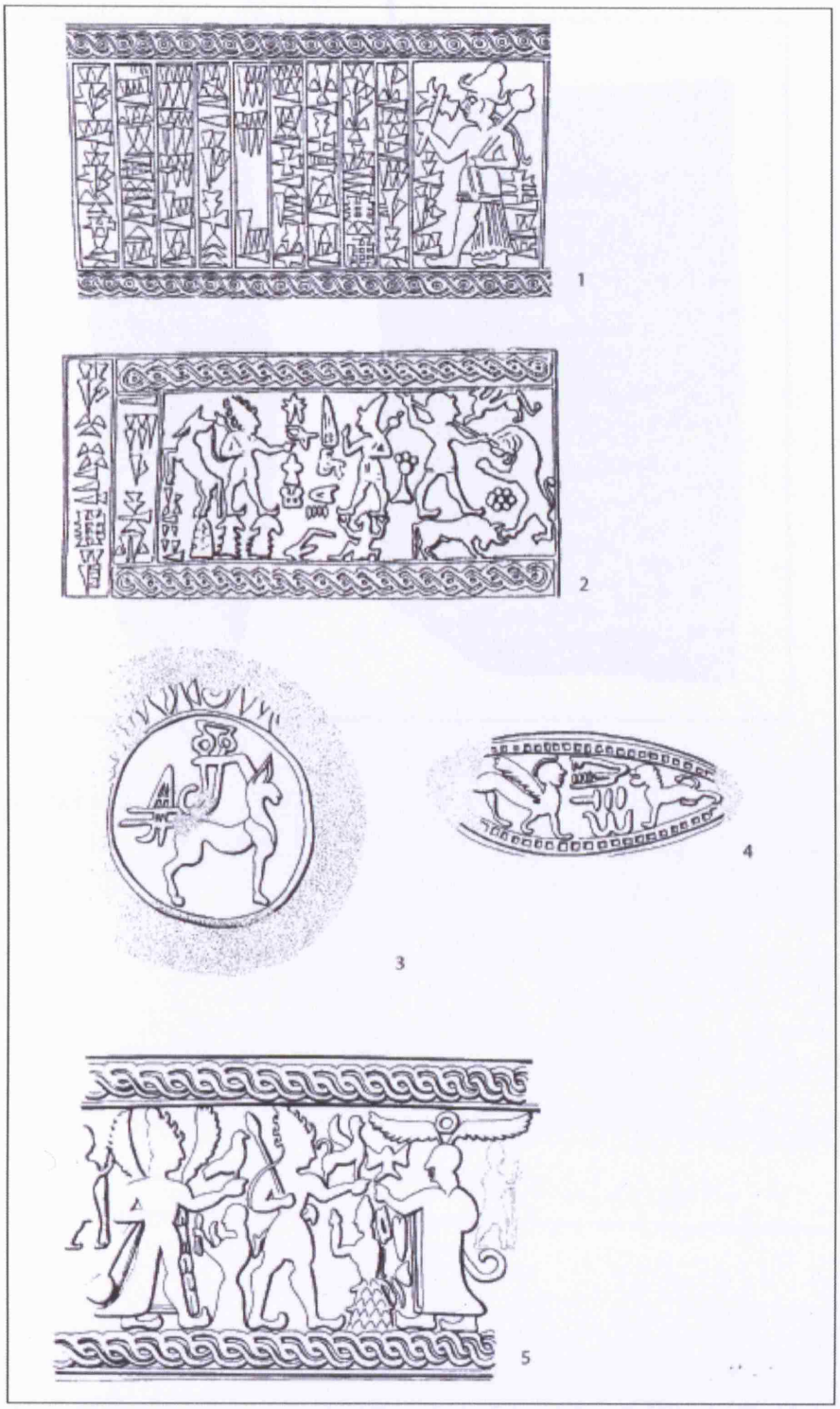
Figure 77: NCA glyptic from Region G2 and H



N.B.: Images not to scale.

1 Norşuntepe (Wälfler 1974, 80 Nr. 2)
2 Norşuntepe (Wälfler 1974, 80 Nr. 3)
3 Norşuntepe (Wälfler 1974, 80 Nr. 4)
4 Tepecik (Esin 1969, 88 T.69.683)
5 Tepecik (Esin 1969, 88 T.69.607)
6 Tille Höyük (Collon 1993, 177, Nr. 5)
7 Tille Höyük (Collon 1993, 177, Nr. 6)
8 Lidar Tille Höyük (Beyer 2001, 153)

Figure 78: Syro-Hittite glyptic from Emar (Beyer 2001, Nos. A2b, A3, C19, B46, A46)

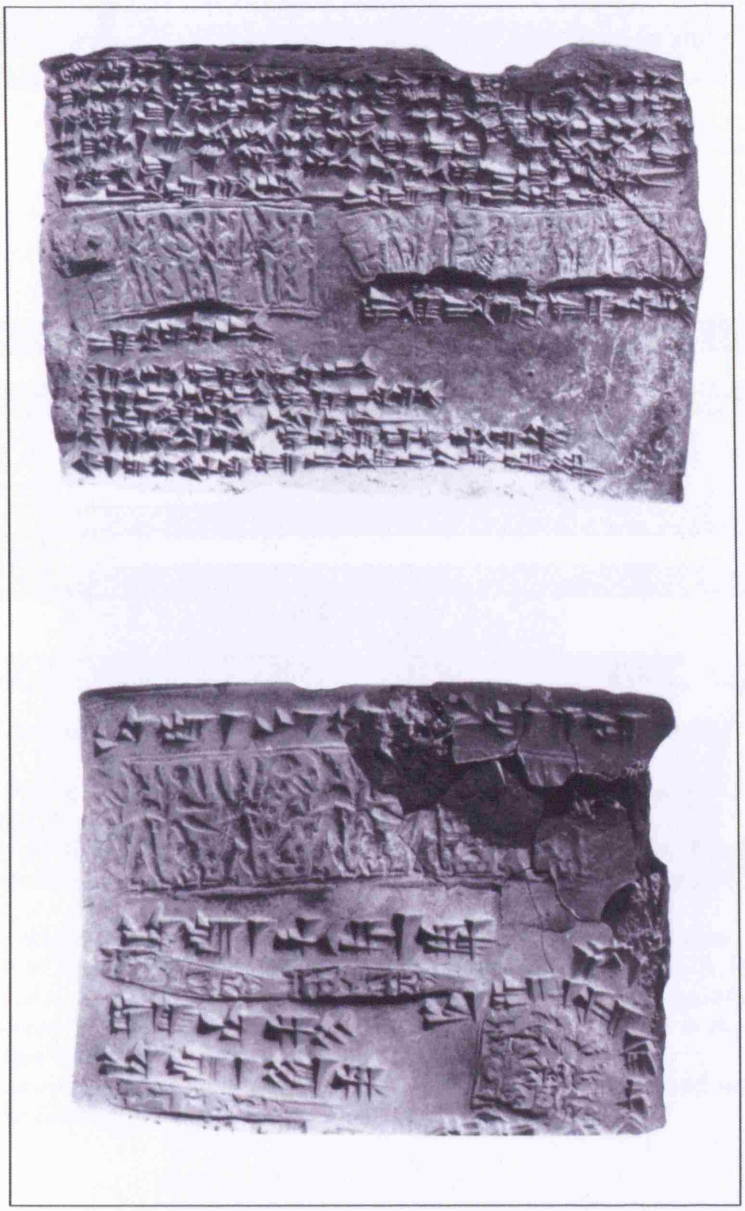


N.B.: Images not to scale.

Figure 79: Syrian tablet format from Emar (Beyer 2001, Planche 9c and 9d)

N.B.: Images not to scale.

Figure 80: "Syro-Hittite" tablet format from Emar (Beyer 2001, Planche 1b and 1c)



N.B.: Images not to scale.

Table 35: Hypothetical chronological distribution of identifiable LBA landscape monuments

Years	1339	1306	1282	1250	1220	1215	BC
Great Kings	Mursili II	Muwatalli II	Hattusili III	Tudhaliya IV	Arnuwanda III	Suppiluliuma II	
		Sirkeli 1	Fıraktın	Yazılıkaya/ Hattusa Delihasanlı Yalburt Emirgazi Eflâtun Pınar (?)[1] Karakuyu		Hattusa	
Officials							
			Taşçı A				
Princes							
	İmamkulu[2] Hanyeri A[2] Akpınar 1[2]		Hanyeri B[4]	.... Hamite[4] ...			
Great Prince							
	Suratkaya[3]						
Kings							
			Sirkeli 2[5],	Hatip Karabel A			
Years	1339	1306	1282	1250	1220	1215	BC

[1] *No inscription but usually assumed to date to Tudhaliya IV on the basis of art historical criteria.*

[2] *Inscriptions of Prince Ku(wa)lanamuwa. This name is mentioned in the Annals of Mursili II (Goetze 1967, 26-27).*

[3] *Zeichengruppe 5: "Great Prince Kupaya". It has been suggested that Kupaya the same person as Kupanta-Kuruntiya, the adopted nephew of Mursili II and later king of Mira (Herbodt 2001).*

[4] *Hawkins (2000, 39 Anm. 16) has suggested that the prince Tarhuntabiyammi of the Hanyeri relief and the prince Tarhuntabiya of Hamite may be brought in connection. A Tarhuntabiya is mentioned in the Ulmi-Tesub Treaty, dating to the reign of Hattusili III or Tudhaliya IV (van den Hout 1995). It follows that the son of Tarhuntabiyammi, who is portrayed in the Hamite relief was a contemporary of the last Hittite great kings.*

[5] *Hieroglyphic inscription destroyed. Ehringhaus (2005, 100-102) proposed an identification with Kurunta of Tarhuntassa.*

Figure 81: Yalburt

Figure 82: Yalburt – view to the south-east

Figure 83: Eflâtun Pınar

Figure 84: Fasıllar

Figure 85: Fasıllar replica at the Museum of Anatolian Civilisations in Ankara

Figure 86: Karakuyu reservoir aedicula of Tudhaliya IV (Ehringhaus 2005, Abb. 92)

Figure 87: Karakuyu reservoir (Emre 1993, Fig. 2 from Von der Osten 1933, fig. 115)

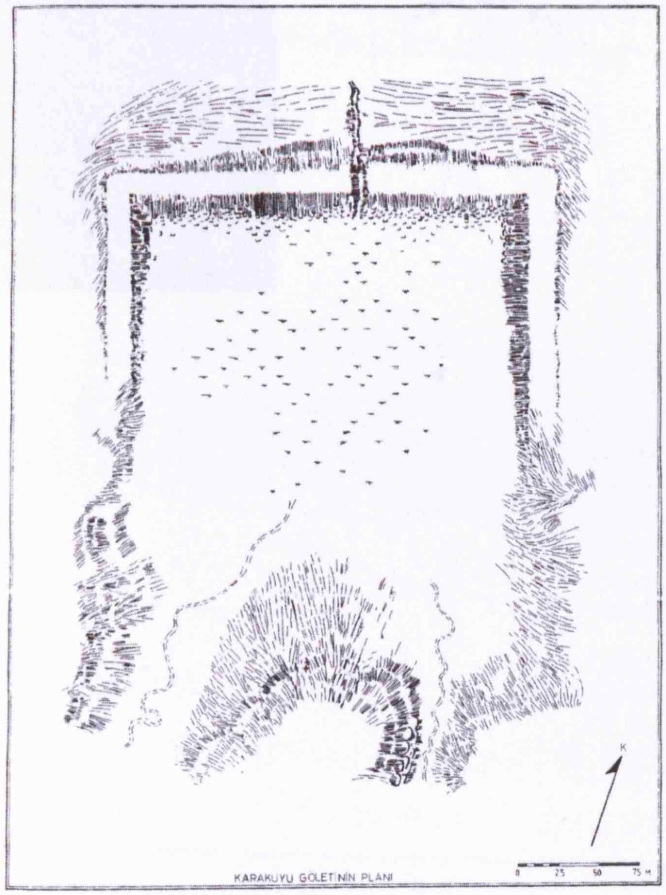


Figure 88: Sirkeli 1 (Ehringhaus 2005, Abb. 175 and 176)

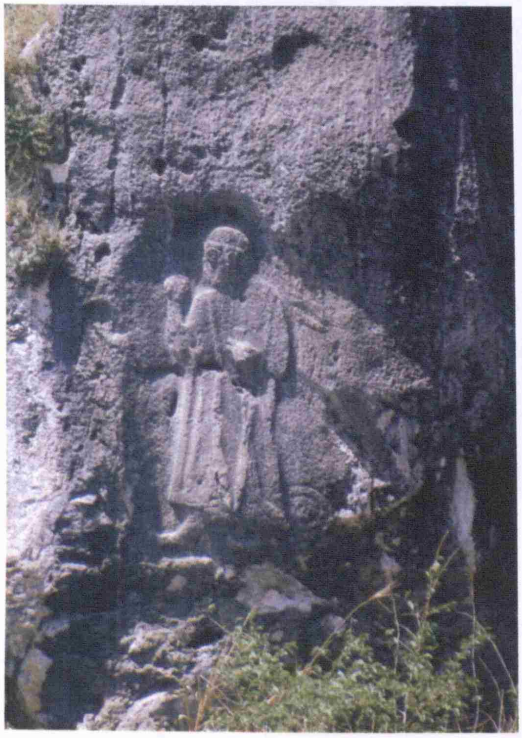


Figure 89: Gâvur Kalesi (Ehringhaus 2005, Abb. 12)

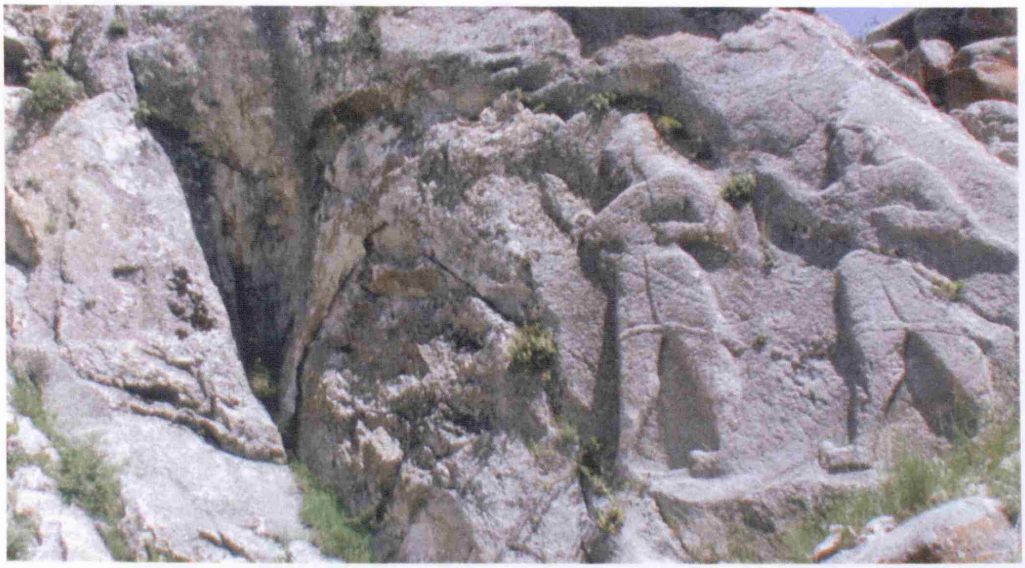


Figure 90: Gâvur Kalesi (Kohlmeyer 1983, Fig. 16)

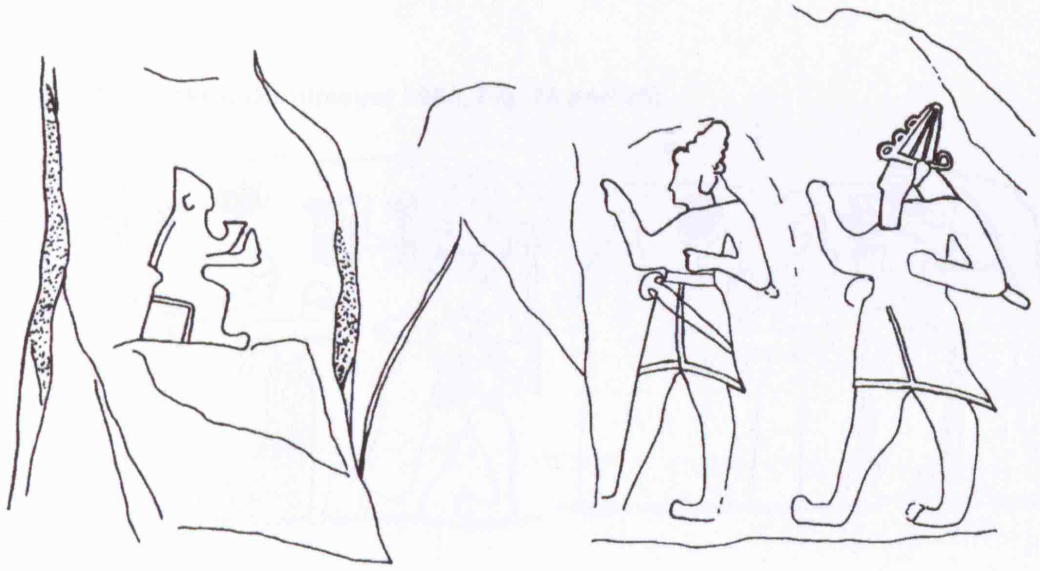


Figure 91: Fıraktın (Ehringhaus 2005, Abb.112)

Figure 92: Fıraktın (Kohlmeyer 1985, Fig. 24 and 25)

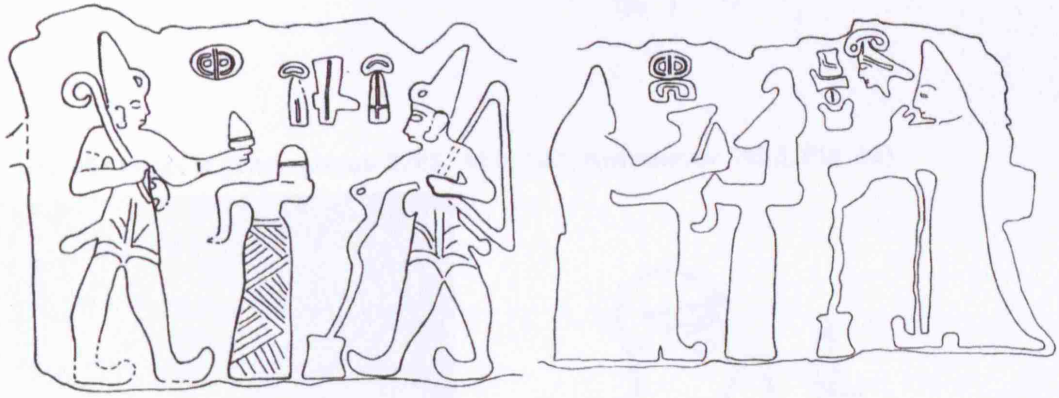


Figure 93: Taşçı A (Ehringhaus 2005, Abb. 123)

Figure 94: Taşçı A (Kohlmeyer 1983, Fig. 29)

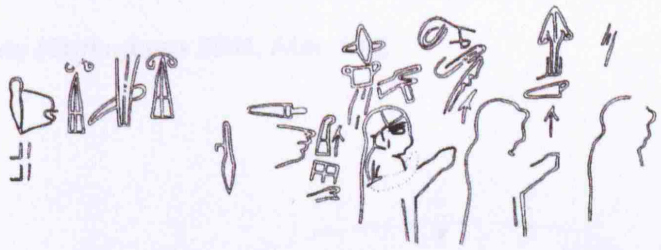


Figure 95: Taşçı B (Ehringhaus 2005, Abb. 127; Kohlmeyer 1983, Fig. 32)

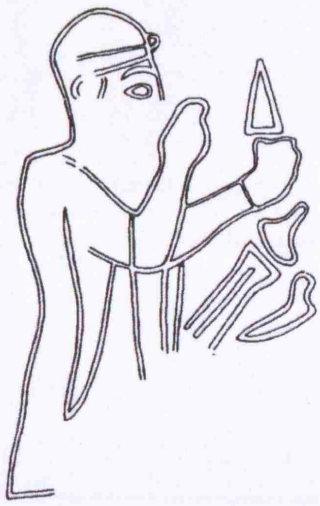


Figure 96: İmamkulu (Ehringhaus 2005, Abb. 133)

Figure 97: İmamkulu (Ehringhaus 2005, Abb. 134)

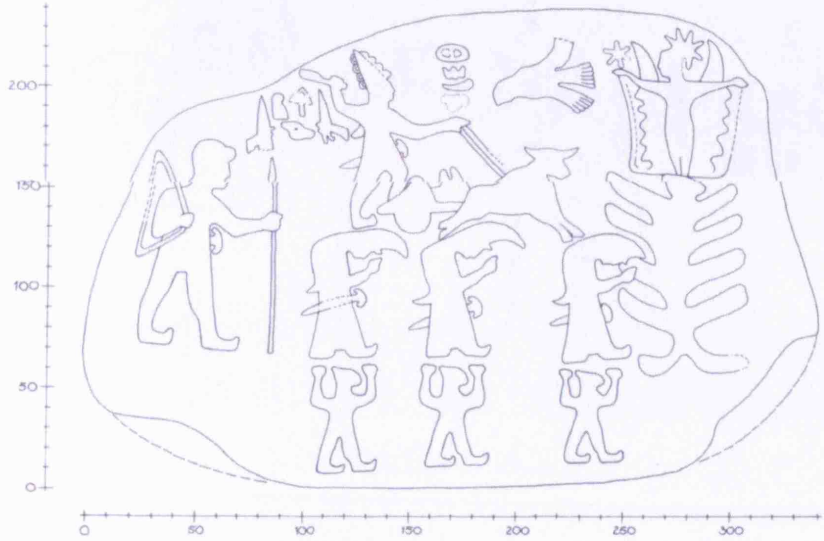


Figure 98: Hanyeri (Ehringhaus 2005, Abb. 142)

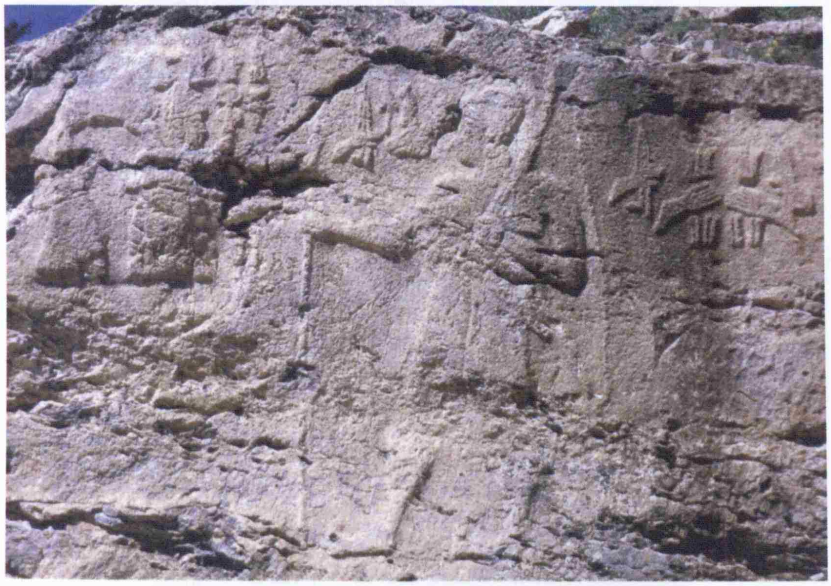
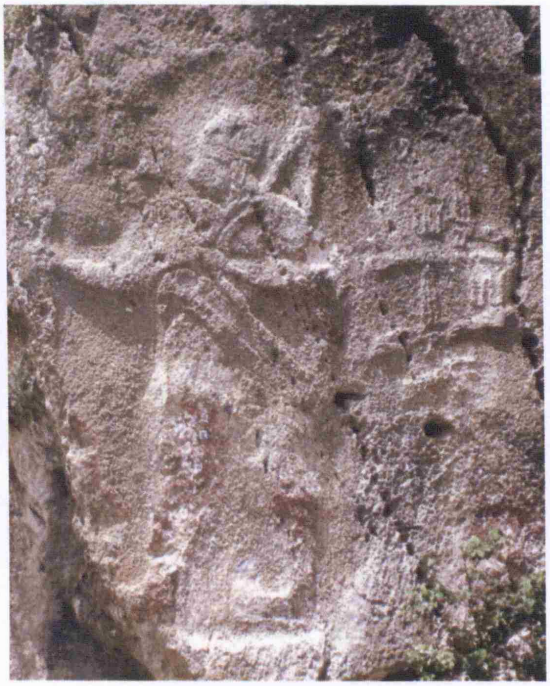


Figure 99: Hanyeri (Ehringhaus 2005, Abb. 143)

Figure 100: Hamite (Ehringhaus 2005, Abb. 193 and 194)



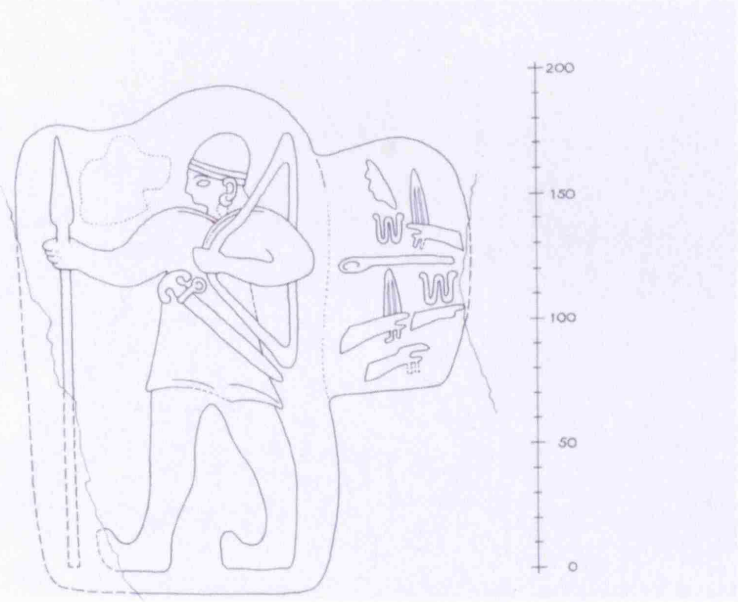
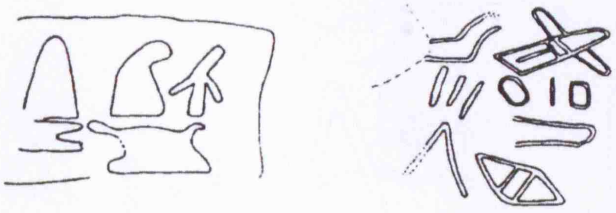


Figure 101: Suratkaya rock face (Ehringhaus 2005, Abb. 166)

Figure 102: Suratkaya incision of "Great Prince" (Ehringhaus 2005, Abb. 169)

Figure 103: Akpınar (Ehringhaus 2005, Abb. 154)

Figure 104: Akpınar (modified after Kohlmeyer 1983, Fig. 9 and 10)



Inscription 1 *Inscription 2*

Figure 105: Karabel (Ehringhaus 2005, Abb. 161; Kohlmeyer 1983, Fig. 2)

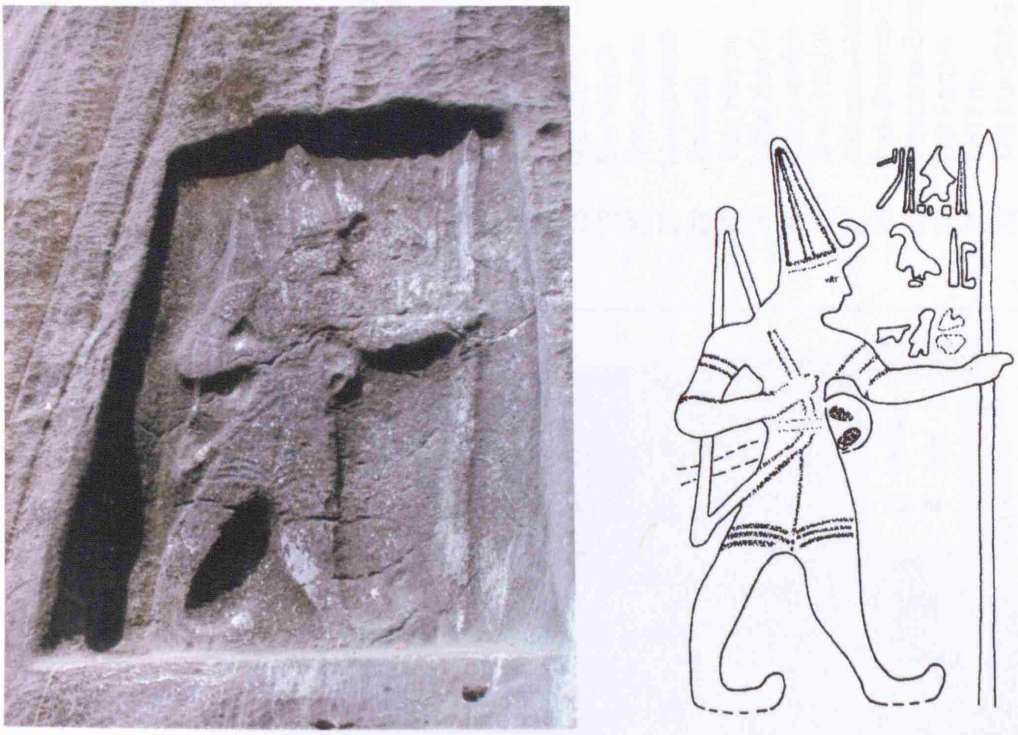
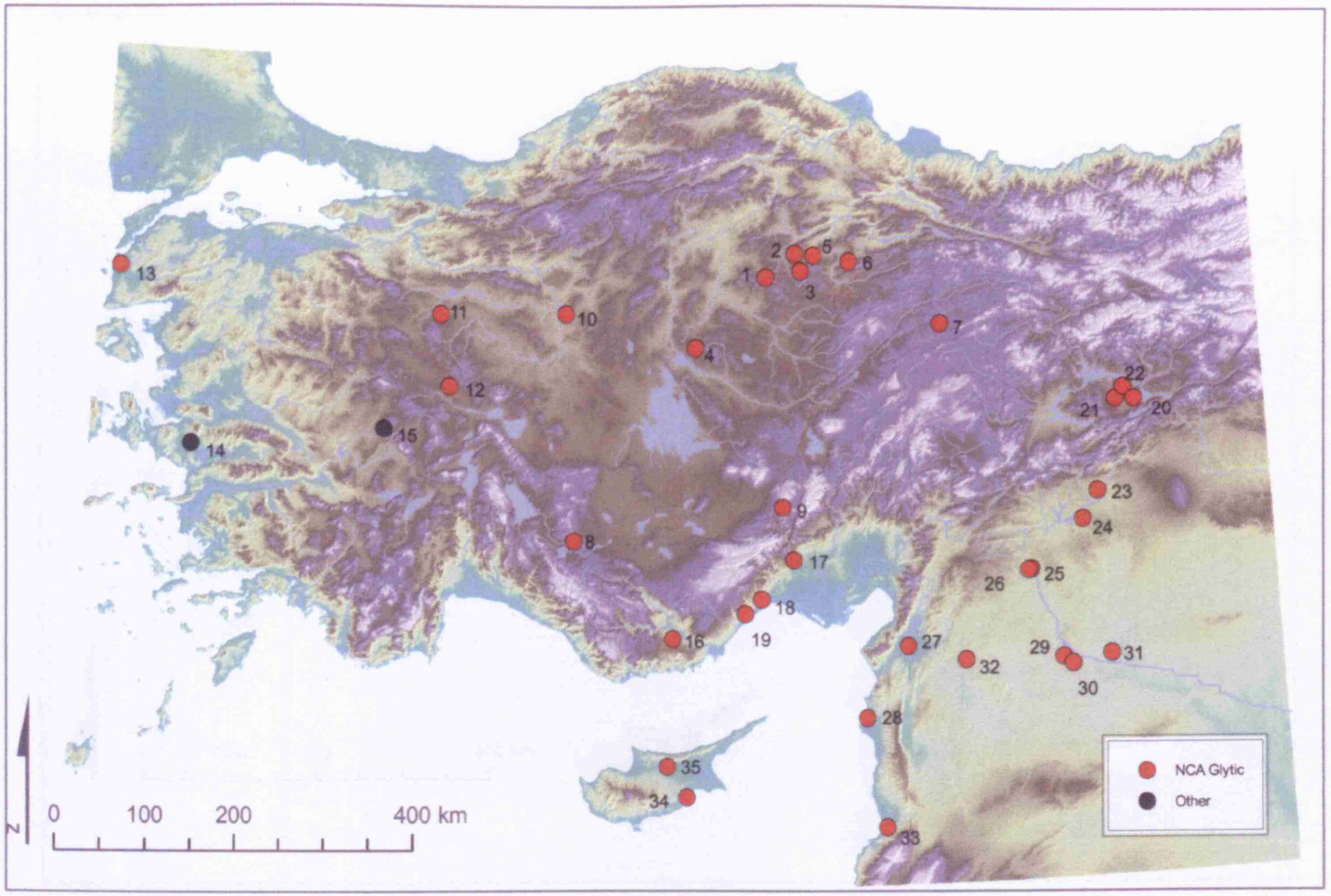


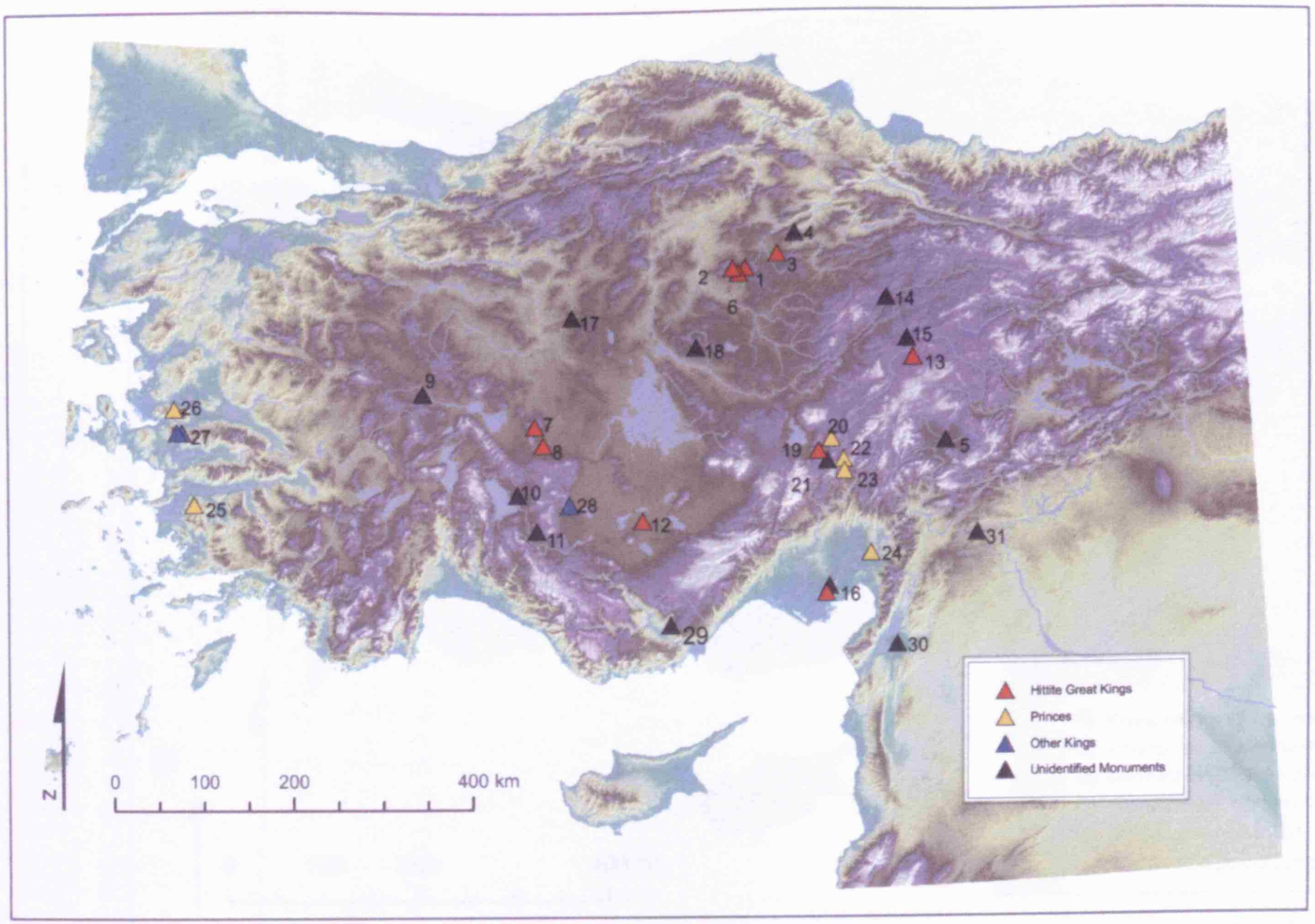
Figure 106: Hatip (Ehringhaus 2005, Abb. 186)

Map 48: Distribution of NCA administrative technology



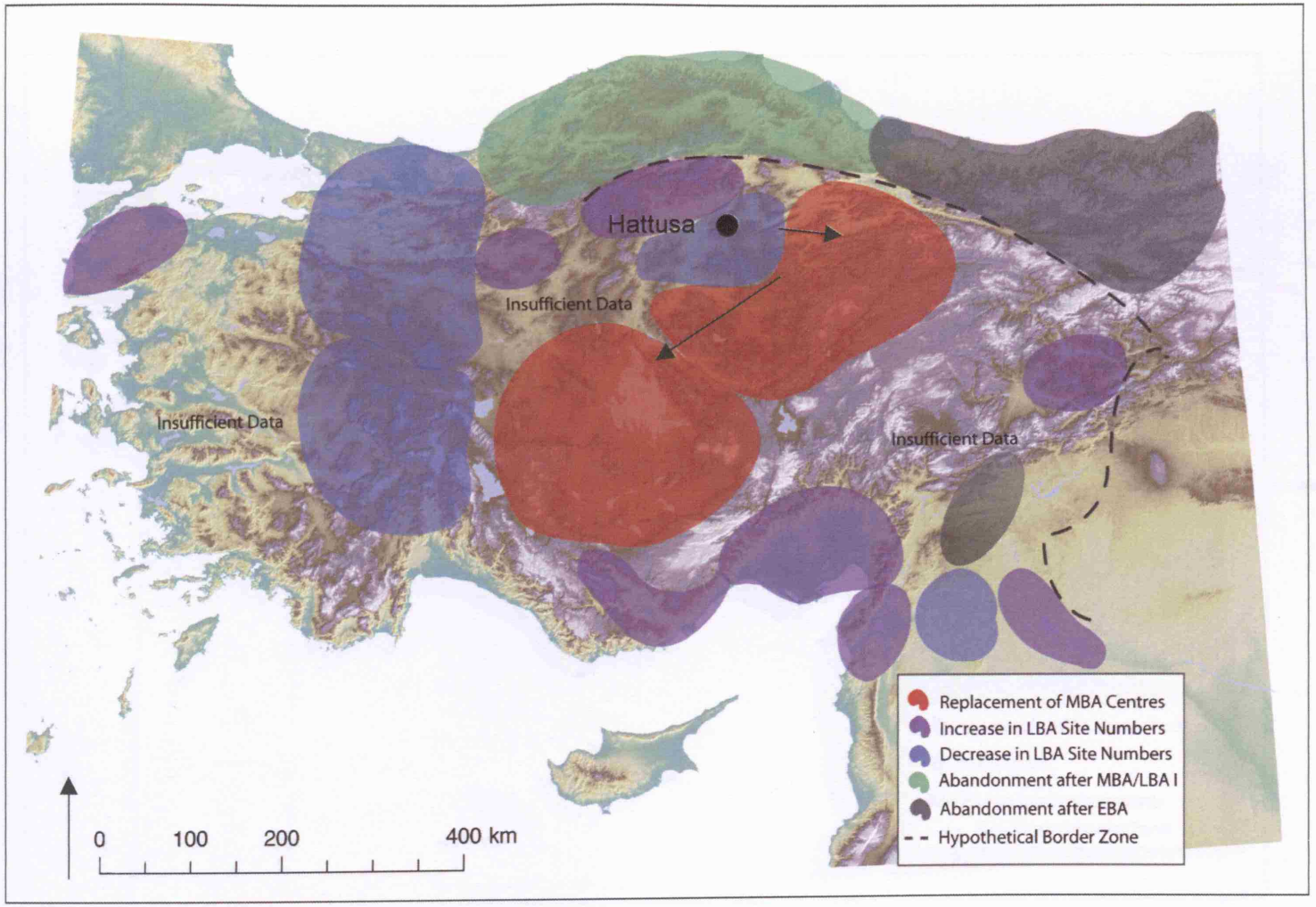
1 Boğazköy-Hattusa
2 Alaca Höyük
3 Eskiyapar
4 Kaman-Kalehöyük
5 Ortaköy-Sapinuwa
6 Maşat-Tapikka
7 Kuşaklı-Sarissa
8 Oktakaraviran
9 Porsuk
10 Gordion
11 Şarhöyük-Dorylaion
12 Hisarhöyük-Ayfon
13 Troy
14 Metropolis
15 Beycesultan
16 Kilise Tepe
17 Tarsus
18 Mersin
19 Soli Höyük
20 Korucutepe
21 Norşuntepe
22 Tepecik
23 Tille Höyük
24 Lidar Höyük
25 Carchemish
26 Deve Höyük
27 Atchana-Alalakh
28 Ras Shamra-Ugarit
29 Meskene-Emar
30 Tell Faq'us
31 Tell Fray
32 Tell Mardikh-Ebla
33 Tell Kazel
34 Hala Sultan Teke
35 Tamassos

Map 49: Distribution of LBA landscape monuments

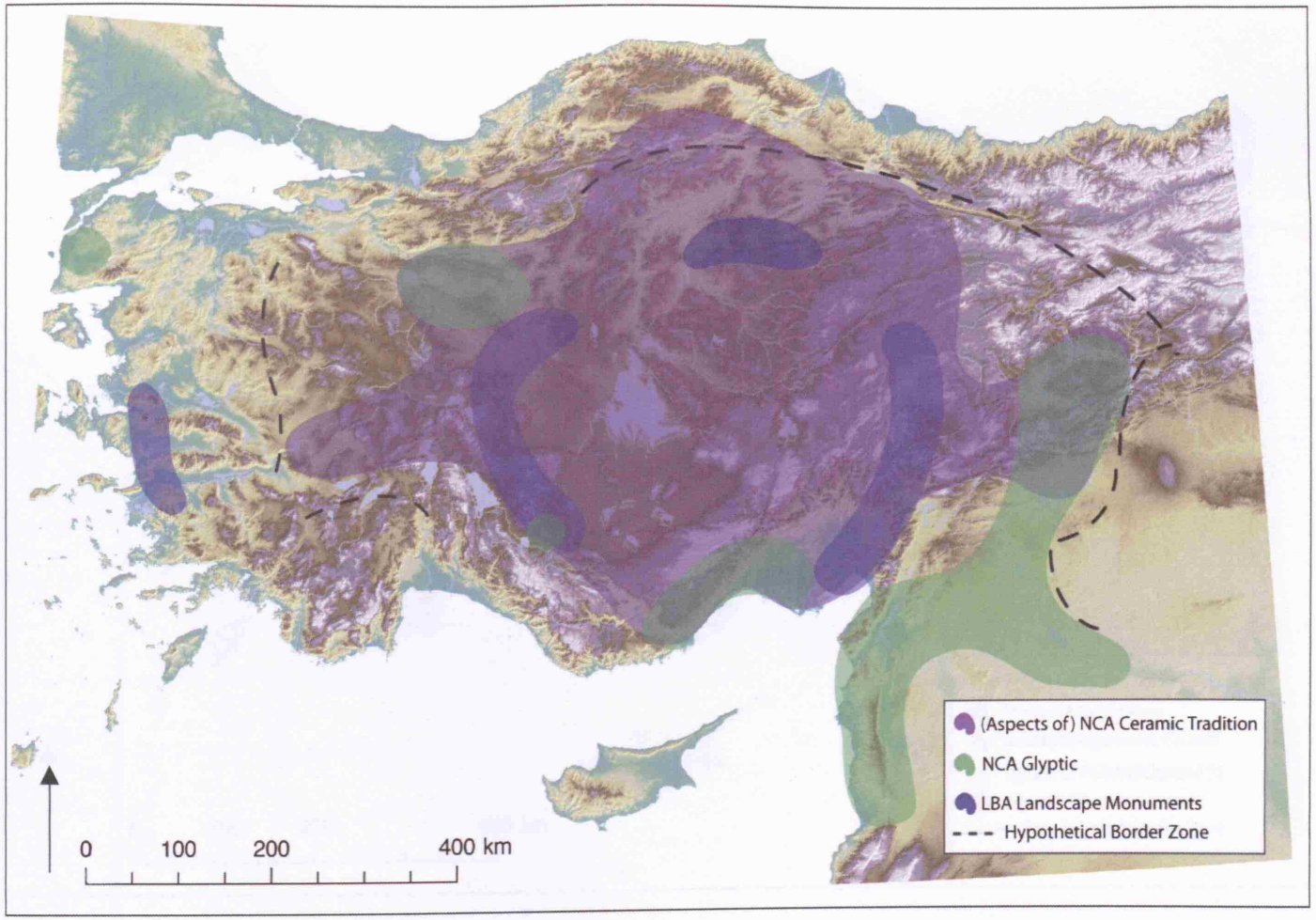


1 Boğazköy-Hattusa
2 Delihasanlı
3 Alaca Höyük
4 Ortaköy-Sapinuwa
5 Karahöyük-Elbistan
6 Yazılıkaya
7 Yalburt
8 Köylütolu
9 Ayfon Stele
10 Eflâtun Pınar
11 Fasıllar
12 Emirgazi
13 Karakuyu Reservoir
14 Kayalıpınar
15 Sivas Stele
16 Sirkeli 1 and 2
17 Gâvur Kalesi
18 Malkaya
19 Fıraktın
20 Taşçı A
21 Taşçı B
22 İmamkulu
23 Hanyeri
24 Hamite
25 Suratkaya
26 Akpınar
27 Karabel
28 Hatip
29 Keben
30 Atchana-Alalakh
31 Çağdin

Map 50: Regional settlement developments



Map 51: Archaeological patterns of inter-regional interaction



Map 52: Zones of contact, interaction and control